



**THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF  
PSYCHIATRISTS**

# **MOCK WRITTENS EXAMINATION**

**(from the Auckland New Zealand program)**

**2012**

**PAPER II**

## **Model Answers**

Note that these Mock Writtens papers are produced by local psychiatrists with no connection to the Examination Committee and are not vetted, test driven and perfected by committee in the way that the real papers are. The main point is not to get fixated about whether the question writers were “right” and you were “wrong” in the model answers, but to practice the marathon of doing 2 full 3-hour papers and practising the technique of the various question types. If you disagree with the factual detail of an answer, research the issue and decide for yourself.

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Alcohol
B.	Cannabis
C.	Tobacco
D.	Opiates
E.	Caffeine
F.	Cocaine
G.	Solvents
H.	Methylenedioxymethamphetamine
I.	Benzodiazepines
J.	Phencyclidine
K.	Benztropine
L.	Lysergic acid

Which substance listed above is the most likely to be implicated in the following examples.

Please select only ONE option, but any option may be used more than once, if required.

1. Water intoxication    **H**
2. Caput medusae    **A**
3. Elevated blood Carbon Monoxide levels    **C**
4. Acute agitation and aggression    **J**
5. Unusual facies and mild mental retardation in children    **A**
6. Groin abscess    **D**

# Extended Matching Questions

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A.	Depersonalisation disorder
B.	Major Depression
C.	Generalised Anxiety disorder
D.	Dysthymia
E.	Derealisation disorder
F.	Post traumatic stress disorder
G.	Agoraphobia
H.	Conversion disorder
I.	Dissociative Identity Disorder
J.	Dissociative fugue
K.	Acute stress disorder
L.	Simple Phobia

Which diagnosis listed above is best demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

7. Marion is afraid of spiders and after the family moves to a home in the bush, she refuses to go outside and becomes housebound.     **L**
8. Jim, a 40 year old accountant, complains of feeling low much of the time. His sleep is poor and he often wakes tired and finds mornings difficult – but he is able to manage work. He tends to over-eat sweet, fatty foods. On assessment he does not meet the criteria for a depression as such. He says that he has felt like this since adolescence and that he grew up with an highly critical father.     **D**
9. A 25 year old woman is admitted to a mental health unit. She is initially vague and seems dazed although she is oriented to time and place but is unable to say who she is. She is able to give some personal details on the third day and her husband, who lives in another city, says when contacted that she vanished a week ago and that he had reported her missing to the police. She has apparently been very stressed as she has lost her job and her mother recently died from cancer.     **J**
10. Malcolm describes himself as "a worrier". He worries about his family, his job security, and has a lot of anticipatory anxiety about many situations such as social events, driving in heavy traffic, and making decisions. He says he has broken sleep, tiredness and always feels tense.     **C**

# Extended Matching Questions

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A.	Nigrostriatal system
B.	Hypothalamus
C.	Mamillary bodies
D.	Cerebellum
E.	Frontal cortex
F.	Right temporal area
G.	Brain Stem
H.	Tuberoinfundibular pathway
I.	Parietal cortex
J.	Amygdala
K.	Temporal cortex
L.	Occipital cortex

Which brain region or system listed above is most associated with each of the following problems.

Please select only ONE option, but any option may be used more than once, if required.

11. Dysgraphia      I

12. Word blindness      L

13. Prosopagnosia      K

14. Dysphagia      G

15. Disinhibited behaviour      E

16. Emotional learning      J

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

<b>A.</b>	Verbal Fluency	<b>I.</b>	HoNOS
<b>B.</b>	HDRS	<b>J.</b>	YMRS
<b>C.</b>	Myers-Briggs Inventory	<b>K.</b>	AIMS
<b>D.</b>	Y-BOCS	<b>L.</b>	Wisconsin Card Sort
<b>E.</b>	PANSS	<b>M.</b>	Wender Utah Rating Scale
<b>F.</b>	CAGE	<b>N.</b>	PASAT
<b>G.</b>	Adult ADHD Questionnaire	<b>O.</b>	Stroop
<b>H.</b>	Trail-making test	<b>P.</b>	BDI

Which diagnostic instrument above is best applied to each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

17. A facilitator plans a team planning day focussed around communication and cooperation and decides to send out a self-evaluation task beforehand to all participants. **C**
18. A 30 year old man presents saying that he has self-diagnosed Adult ADHD using a self-report scale on the internet. He is requesting a trial of methylphenidate but you suspect he may be drug-seeking. **M**
19. A 29 year old graduate student presents with obsessions about contamination and excessive hand washing and showering. **D**
20. A 53 year old woman has severe chronic side effects after years of depot antipsychotics. She is about to be trialled on medication to try to reduce her tardive dyskinesia. **K**
21. You need to assess positive psychotic symptoms in patients with schizophrenia every few weeks, for a research project. **E**
22. You need to assess symptoms in patients with bipolar disorder every few days, for a research project comparing treatments for acute mania. **J**

# Extended Matching Questions

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A.	Stevens Johnson syndrome
B.	Autobiographical memory deficits
C.	Myocarditis
D.	Hearing loss
E.	Seizures
F.	Impaired glucose tolerance
G.	Toursades des pointes
H.	Agranulocytosis
I.	Polycystic ovarian syndrome
J.	Polydipsia
K.	Urinary retention
L.	Worsening psoriasis
M.	Pancreatitis

Which medical adverse effect as above is most likely to be caused by each of the following treatments.

Please select only ONE option, but any option may be used more than once, if required.

23. Electroconvulsive therapy      **B**

24. Olanzapine      **F**

25. Amitriptyline      **K**

26. Sodium Valproate      **I**

27. Transcranial magnetic stimulation      **D**

28. Lithium Carbonate      **J**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

<b>A.</b>	Depersonalisation	<b>I.</b>	Visual illusion
<b>B.</b>	Pareidolia	<b>J.</b>	Prosopagnosia
<b>C.</b>	Déjà vu	<b>K.</b>	Somatic hallucination
<b>D.</b>	Visual agnosia	<b>L.</b>	Palinopsia
<b>E.</b>	Anosognosia	<b>M.</b>	Macropsia
<b>F.</b>	Jamais vu	<b>N.</b>	Visual hallucination
<b>G.</b>	Olfactory hallucination	<b>O.</b>	Dysaesthesia
<b>H.</b>	Derealisation	<b>P.</b>	Micropsia

Which aspect of phenomenology listed above is best demonstrated by the following examples.

Please select only ONE option, but any option may be used more than once, if required.

**29.** An elderly woman with dementia insists that two tiny nuns are sitting on a telephone pole outside her window. Her nurse can only see two magpies.    **N**

**30.** After suffering a stroke, Mr Davidson is unaware that he has a hemiplegia.    **E**

**31.** In the ED, Mark finds he is floating near the ceiling looking down at himself lying on the gurney. He feels oddly calm.    **A**

**32.** Following an LSD trip Sam suffers persistent visual after-images that frighten and distress him.    **L**

**33.** Before the seizure objects look oddly large to Jane, as though magnified.    **M**

**34.** On bad days, it was as though she were looking at the world through a sheet of glass.    **H**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

<b>A.</b>	Cytochrome P450 2B6 induction
<b>B.</b>	First pass effect
<b>C.</b>	Reduced renal clearance
<b>D.</b>	Plasma protein binding
<b>E.</b>	Cytochrome P450 1A2 induction
<b>F.</b>	Narrow therapeutic index
<b>G.</b>	Delayed elimination of active metabolites
<b>H.</b>	Cytochrome P450 2E1 inhibition
<b>I.</b>	Genetic variation in enzyme systems
<b>J.</b>	Body weight altering drug distribution area
<b>K.</b>	A local drug effect
<b>L.</b>	Cytochrome P450 2D6 inhibition
<b>M.</b>	Ligand-gated ion channels

Which aspect of pharmacology listed above is best demonstrated by each of the following examples:

Please select only ONE option, but any option may be used more than once, if required.

35. A 30 year old woman recovering from mania becomes toxic on 1200mgs lithium carbonate after a dose increase.   **F**

36. Better clinical response to an intramuscular depot preparation than to oral phenothiazine.   **B**

37. Nortriptyline dose is reduced when fluoxetine is added to therapy.   **L**

38. Diazepam is used to treat delirium tremens.   **M**



# Extended Matching Questions

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All questions are worth 1 mark

A.	Chunking
B.	State-Dependent learning
C.	Distributed practice
D.	Abstraction
E.	Mnemonic device
F.	Transfer effect
G.	Rehearsal effect
H.	Text Organization
I.	Prior Knowledge effect
J.	Serial position effect
K.	Meaningfulness
L.	Massed practice

Which concept regarding Learning, from the list above, is best demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

39. A psychiatric registrar memorises the Stage Theory Model of memory by visualising each stage as positioned within the rooms of his house, through which he is walking. **E**

40. A psychology student with a family history of depression struggles to memorise the neuroanatomy part of her text, but has little difficulty with the mood disorder section. **K**

41. A medical student prepares for an exam well in advance, spreading out his study periods over several weeks and varying the topics covered. **C**

42. Well into the 20<sup>th</sup> century, school children were made to repeat their times tables. **L**  
poorly written Q – could also be G although L is a little more specific than G

# Extended Matching Questions

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All questions are worth 1 mark

A.	Frégoli delusion
B.	Delusion of poverty
C.	Cotard delusion
D.	Somatic delusion
E.	Capgras delusion
F.	Grandiose delusion
G.	Erotomanic delusion
H.	Delusion of control
I.	Primary delusion
J.	Mood congruent delusion
K.	Self-referential delusion
L.	Delusion of guilt

Which of the delusional symptoms listed above is best demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

43. A young man insists that several TV announcers know all about him and are gossiping about him – he says he can tell “by the way they look at me funny and make snide remarks about me mixed in with the news.” **K**
44. A woman frightens an elderly stranger when she addresses her as her mother and inquires why she has assumed such an elaborate disguise. **A**
45. After several months in which the world seemed odd and troubling in a way that was hard to pin down, a man suddenly realises that it has been caused by his brother poisoning his food and that his brother is undoubtedly working for the CIA. **I**
46. A young woman complains that her boss is sexually abusing her by forcing her to think sexual thoughts about him. **H**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Gerstmann's syndrome
B.	Chronic schizophrenia
C.	Non-fluent aphasia
D.	Severe Pick's disease
E.	Korsakoff's syndrome
F.	Moderate major depression
G.	Fluent aphasia
H.	Early Alzheimer's dementia
I.	Conduction aphasia
J.	Non-dominant parietal stroke

Which condition listed above is best shown by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

47. His memory is intact. He cannot think of any similarities between a poem and a sculpture. Says that a bicycle and an aeroplane are the same as they "have wheels". **B**
48. She is fully oriented except that she gets today's date wrong by a few days. Her concentration is mildly impaired and she asks you to repeat a few questions. **F**
49. There are deficits in his anterograde memory, and he confabulates freely in a cheerful manner about recent events. **E**
50. She becomes confused when she tries to put on a cardigan - seems baffled by the sleeves and where her arms should go. **J**
51. He cannot tell you the name of his ring and index fingers and cannot do basic arithmetic. **A**
52. There are some deficits in anterograde and retrograde memory on examination but her social skills are preserved. **H**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

<b>A.</b>	Cushings disease
<b>B.</b>	Graves disease
<b>C.</b>	Phaeochromocytoma
<b>D.</b>	Organophosphate toxicity
<b>E.</b>	Psychogenic polydipsia
<b>F.</b>	Renal failure
<b>G.</b>	Liver failure
<b>H.</b>	Porphyria
<b>I.</b>	Hypothyroidism
<b>J.</b>	Hyperparathyroidism
<b>K.</b>	SIADH
<b>L.</b>	Adverse reaction to steroid therapy
<b>M.</b>	Wilson's disease

Which condition listed above is best represented by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 53.** John, aged 46, develops panic attacks with palpitations, sweating and weight loss. There are no clear life stressors.      **C**
- 54.** Dasha is a 60 year old immigrant who was brought here by her extended family a year ago. They regard her as “backward” and she has been kept secluded away from other people. She presents after developing delusions of being poisoned, and on assessment is noted to have a puffy face, long latency in replies and cognitive deficits.      **I**
- 55.** Steven has severe asthma. While in hospital he is referred to the liaison team as he has developed grandiose and persecutory delusions.      **L**
- 56.** Jonathon ceases penicillamine and starts naturopathy. Six months later he is admitted with a manic psychosis.      **M**

# Extended Matching Questions

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All questions are worth 1 mark

A.	"Intermediate" metaboliser genotype of 2D6
B.	5HTT gene "S" genotype
C.	Junk DNA
D.	"Extensive" metaboliser genotype of 2D6
E.	Non-dominant
F.	CAG trinucleotide repeats
G.	Translation
H.	5HTT gene "L" genotype
I.	Transcription
J.	"Ultra-rapid" metaboliser genotype of 2D6
K.	Autosomal
L.	Single nucleotide polymorphisms
M.	CTG trinucleotide repeats

Which concept as above is the best demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

57. Huntingdon's disease    **F**

58. A good response to SSRI medication                      **H**

59. Common sequence variations in genetic code            **L**

60. Traits carried on chromosomes other than the sex chromosomes            **K**

61. Increased medication adverse effects                      **A**

62. Process of converting genetic instructions coded in a segment of DNA into mRNA    **I**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Paranoid schizophrenia
B.	Neuroleptic malignant syndrome
C.	Delirium tremens
D.	Psychotic depression
E.	Malingering
F.	Schizoaffective disorder
G.	Catatonic schizophrenia
H.	Malignant catatonia
I.	Disorganised schizophrenia
J.	Melancholic depression
K.	Manic stupor
L.	Cannabis induced psychosis
M.	Catatonia due to hepatic encephalopathy

Which diagnosis listed above is the most likely to be demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

63. A young man is repeatedly admitted with the same pattern of symptoms, which always recur after he stops his clozapine. At these times he is mute and displays echopraxia and waxy flexibility. **G**
64. A woman with a bipolar disorder becomes deluded that her brain has rotted and that she is already dead. By the time of admission she has ceased to eat or drink, is barely moving and does not respond to questioning. **D**
65. A man with a history of recurrent depression and hypomania is admitted with an acute psychosis and then becomes incoherent. Shortly afterwards he is found mute and immobile, standing upright tilted at an odd angle. **K**
66. A medically admitted homeless man with portal hypertension develops confusion and asterixis and then falls into a mute and immobile state. **M**
67. A youth with no psychiatric history develops delusions and odd behaviour. He goes missing and is found collapsed in a local park. On admission he is mute, dehydrated and immobile, with rigid muscles, a low-grade fever and blood pressure of 150/90. **H**
68. A man remanded to prison for murder becomes mute and immobile. His muscles have normal tone and there is no waxy flexibility, just resistance to movement. **E**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Non-maleficence
B.	Utilitarianism
C.	Ethical relativism
D.	Value judgement
E.	Justice
F.	Categorical Imperatives
G.	Privacy
H.	Autonomy
I.	Compassion
J.	Stigma

For each of the following examples, please select the corresponding ethical term or concept as listed above.

Please select only ONE option, but any option may be used more than once, if required.

69. A community mental health clinic provides a rural outreach service. **E**

70. A judge orders compulsory community rather than inpatient treatment as the "least restrictive" option for a man with chronic schizophrenia. **H**

71. Jim is on the waiting list for two years before he gets his varicose veins fixed. **B**

72. A psychiatric registrar takes care to explain the possible side effects of a proposed new treatment to her patient. **A**

73. A college student does not share her parents' attitudes, but tolerates their views. **C**

74. Maternal mental health inpatient beds are not funded as service leaders feel that the number of patients requiring them is too low to justify the cost. **B**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Lithium carbonate
B.	Quetiapine
C.	Zopiclone
D.	Lamotrigine
E.	Olanzapine
F.	Phenelzine
G.	Benztropine
H.	Risperidone
I.	Aripiprazole
J.	Clozapine
K.	Clonazepam
L.	Gabapentin
M.	Sodium valproate
N.	Procyclidine

Which medication listed above is the most likely to cause each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

75. A young woman gains weight and develops hirsutism and menstrual changes. **M**

76. A 55 year old man develops the “bonbon” sign. **H**

77. A 47 year woman develops a feeling of pressure in her throat, and has problems swallowing. **A**

78. A man living in a supported hostel is rushed to hospital with a serious pneumonia of sudden onset. **J**

79. A woman being treated for persistent depression develops fever, fatigue and mouth ulceration. **D**

80. A 59 year old woman accepts that giving up vegemite is worth it to help manage her previously intractable depression. **F**



# Extended Matching Questions

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All questions are worth 1 mark

A.	Reactive attachment disorder
B.	Attention deficit disorder with hyperactivity
C.	Separation anxiety disorder
D.	Autism
E.	Conduct disorder
F.	Pervasive developmental disorder
G.	Expressive language disorder
H.	Hypochondriasis
I.	Rett's disorder
J.	Feeding disorder of infancy or early childhood
K.	Prader-Willi syndrome
L.	Mild mental retardation
M.	Chronic motor tic disorder
N.	Oppositional defiant disorder
O.	Selective mutism
P.	Attention deficit disorder inattentive type

Which diagnosis listed above is the most likely to be demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

81. A 3 year old boy plays by himself and spends long periods of time spinning the wheels on his toys. **D**
82. A 6 year old girl is chatty at home with her family but does not talk to anyone at school, where she appears anxious and shy. **O**
83. A 5 year old boy exhausts his mother at home with restless, impulsive behaviour. At school he is disruptive and fidgety, often in trouble with his teachers for lost homework and books, although he tries to cooperate. **B**
84. A 10 year old boy appears angry and difficult, with frequent tantrums. At school he is often in trouble, getting into arguments with his teachers. He is not, however, physically aggressive, and there is no truanting. **N**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

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A.	Full blood count and differential monthly
B.	A monthly ECG
C.	Annual thyroid function tests
D.	Three-monthly HB1AC blood tests
E.	Annual liver function testing
F.	Serum lipids
G.	Full blood count and differential weekly
H.	A fasting blood glucose level
I.	Annual girth measurements
J.	Monthly serum levels of the medication
K.	Two-weekly renal function testing
L.	An annual AIMS test

Which test listed above is the most important to arrange in each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

85. A 35 year old woman with bipolar disorder is maintained on lithium. Her last manic relapse resolved three months ago. **J**

86. A 41 year old man with schizophrenia is stable on clozapine, with good symptom control five months after commencing this. **A**

87. A 24 year old man with schizophrenia who is treated with olanzapine develops thirst and polyuria. **H**

88. A 47 year old woman with a delusional disorder is treated with a low dose of haloperidol decanoate injection every month and has been stable on this for many years. **L**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

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<b>A.</b>	Munchausen syndrome
<b>B.</b>	Body Dysmorphic Disorder
<b>C.</b>	Hypochondriasis
<b>D.</b>	Acute Stress Disorder
<b>E.</b>	Depersonalization disorder
<b>F.</b>	Bulimia nervosa
<b>G.</b>	Factitious disorder With Predominantly Psychological Signs and Symptoms
<b>H.</b>	Amnestic Disorder Due to Head Trauma
<b>I.</b>	Dissociative Identity Disorder
<b>J.</b>	Paranoid schizophrenia
<b>K.</b>	Anorexia nervosa
<b>L.</b>	Acute Posttraumatic Stress Disorder
<b>M.</b>	Factitious disorder With Predominantly Physical Signs and Symptoms
<b>N.</b>	Delusional disorder
<b>O.</b>	Dissociative amnesia
<b>P.</b>	Somatization Disorder
<b>Q.</b>	Conversion Disorder
<b>R.</b>	Pain Disorder

Which diagnosis listed above is best demonstrated by each of the following examples.

Please select only one option, but any option may be used more than once, if required.

- 89.** A young woman aged 24 eats very little and is preoccupied with getting fat despite being quite underweight. On interview she confides that her mother is fattening her up so as to sell her as a slave. She knows this from hearing “aliens” discussing her outside bedroom window, at night. **J**
- 90.** A man admitted voluntarily to a psychiatric ward expressing suicidal ideas gives a history of his wife having been killed recently in a boating accident. After a week, ward staff discover that he has used an assumed name, and that he gives different staff different accounts. **G**
- 91.** An American journalist captured by militants in Libya witnesses other prisoners being shot. Six weeks later, after being ransomed, he feels emotionally numb, has intrusive memories of the experience, and avoids the local laundry which is owned by a Moroccan family. **L**
- 92.** A 29 year old woman visits her GP many times across several years complaining of nausea and abdominal “cramps and pressure”. She also describes painful menstruation and a blockage in her throat that makes swallowing difficult. Investigations are negative. **P**
- 93.** A man moves from hospital to hospital describing symptoms of acute appendicitis. He has had surgery on several occasions and his normal appendix was removed some years ago. **M**
- 94.** After a back injury at work, a 49 year old man's pain does not resolve. It worsens when he is embroiled in a battle for compensation with his prior employers. Covert video taken by his employers' insurance company shows no evidence of malingering. **R**

# Extended Matching Questions

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<b>A.</b>	Major depressive disorder
<b>B.</b>	Primary insomnia
<b>C.</b>	Dissociative fugue
<b>D.</b>	Conversion disorder
<b>E.</b>	Acute stress disorder
<b>F.</b>	Delirium due to general medical condition
<b>G.</b>	Factitious disorder
<b>H.</b>	Panic disorder
<b>I.</b>	Delusional disorder
<b>J.</b>	Pseudoseizures
<b>K.</b>	Munchausen syndrome by proxy
<b>L.</b>	Temporal lobe epilepsy
<b>M.</b>	Adjustment disorder with depressed and anxious mood
<b>N.</b>	Generalised anxiety disorder
<b>O.</b>	Borderline personality disorder
<b>P.</b>	Posttraumatic stress disorder

Which diagnosis listed above is best demonstrated by each of the following examples.  
Please select only one option, but any option may be used more than once, if required.

- 95.** A 24 year old student has been crying frequently and complains of being unable to sleep since being told she has Type I diabetes three days ago.   **M**
- 96.** A 37 year old woman in an unhappy marriage develops an inability to walk and is admitted neurologically. No cause is found on physical examination or other assessments.   **D**
- 97.** A 28 year old woman has frequent episodes in which she falls to the floor of the neurology ward and thrashes about with her arms and legs while screaming. She is never injured during these episodes, which occur more during visiting hours.   **J**
- 98.** A 4 year old girl is admitted repeatedly for weight loss, fevers and recurrent infections, but no cause is found. Her mother is very solicitous, always stays in her daughter's room, and gets on well with some of the staff, although other nurses dislike her.   **K**
- 99.** A woman aged 41 reluctantly agrees to see a psychiatrist. She is certain that she has very severe body odour although no-one else is aware of this. She has damaged her skin from scrubbing.   **I**
- 100.** A man develops brief episodes during which he becomes vague, makes strange, repetitive gestures and smacks his lips. He has no recall of these episodes.   **L**

# Extended Matching Questions

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All questions are worth 1 mark

<b>A.</b>	Alcohol abuse
<b>B.</b>	Neuroleptic malignant syndrome
<b>C.</b>	Delirium tremens
<b>D.</b>	Lorazepam withdrawal
<b>E.</b>	Opiate withdrawal
<b>F.</b>	Serotonin syndrome
<b>G.</b>	Mild alcohol withdrawal
<b>H.</b>	Alcohol intoxication
<b>I.</b>	Pathological gambling
<b>J.</b>	Alcohol dependence

Which problem listed above is best demonstrated by each of the following examples.

Please select only one option, but any option may be used more than once, if required.

- 101.** Shane gets to his local bar every day and waits impatiently until it opens.    **J**
- 102.** Andrew is arrested after embezzling thousands of dollars from clients' accounts.    **I**
- 103.** Joe binge drinks on Fridays, but doesn't miss drinking the rest of the week.    **A**
- 104.** Shirley aches all over. Her nose runs and she keeps yawning.    **E**
- 105.** Patrick is confused and sees bats flying in the windows to attack him.    **C**
- 106.** Mark becomes maudlin and tedious, telling the other patrons about his woes.    **H**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Cognitive behavioural therapy
B.	Dialectical behavioural therapy
C.	Grief therapy
D.	Short-term psychodynamic therapy
E.	Jungian psychoanalysis
F.	Interpersonal therapy
G.	Exposure and response prevention
H.	Expressive therapy
I.	Marital therapy
J.	Family therapy

For each of the following examples, please select the corresponding type of therapy as listed above.

Please select only one option, but any option may be used more than once, if required.

107. The therapist gets Margaret to bring in photos of Jim and for the first time since the accident, she is able to talk about him. **C**
108. Gunther wants to balance his animus and anima. **E**
109. The treatment programme offers a psychodrama group. **H**
110. Barry decides, with his therapist, to focus on role transition and interpersonal deficits. **F**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Anorexia nervosa
B.	Bulimia nervosa
C.	Binge eating disorder
D.	Eating disorder NOS
E.	Pica
F.	Feeding Disorder of Infancy or Early Childhood
G.	Rumination Disorder
H.	Comfort eating
I.	Prader-Willi syndrome
J.	Atypical depression

For each of the following examples, please select the corresponding ethical term or concept as listed above.

Please select only one option, but any option may be used more than once, if required.

111. Bettina wears baggy, concealing clothes and spends hours at the gym. **A**
112. After his mother's death when he is aged one, Billy goes through a phase of chewing his cud and spitting up food soon after meals, which only makes his aunt yell at him even more. **G**
113. A newborn baby has floppy muscle tone and requires tube-feeding. **I**
114. Kim, aged 4, does not eat properly and loses weight. Her mother is alcohol dependent and is often asleep or intoxicated. **F**
115. After separating from her husband, Sandra is acutely sensitive to feeling criticized, sleeps more than usual and eats more high calorie food than usual. **J**
116. Maria has severe dental caries and finger calluses. **B**

# Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A.	Iodine deficiency
B.	Trisomy 21
C.	Cri du chat syndrome
D.	Velocardiofacial syndrome
E.	Perinatal hypoxia
F.	Maternal alcohol abuse
G.	Maternal rubella
H.	Klinefelter's syndrome
I.	Fragile x syndrome
J.	Measles encephalopathy

For each of the following examples, please select the corresponding item from the list as above.

Please select only one option, but any option may be used more than once, if required.

117. Christine is gawky and clumsy, with a long face, flat feet, and extreme shyness. She has problems attending in school.      **I**
118. Mohammed is from an Kazakhstani immigrant family. He is unusually short and has slow reflexes, thickened skin and cognitive impairment.      **A**
119. Micky, aged 6 months, has a thin upper lip and reduced eye width.      **F**
120. Joey refuses to walk any further and sits down stubbornly in the middle of the pedestrian crossing. His teacher cannot budge him.      **B**



## **Extended Matching Questions**

### **Questions 121 to 130**

**THE FOLLOWING QUESTIONS ARE WORTH TWO MARKS EACH.  
ONE MARK FOR EACH CORRECT ANSWER.**

**Do not answer questions in this booklet.**

**Use the separate answer sheet and pencil provided.**

## Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

<b>A.</b>	Mahler's Differentiation stage
<b>B.</b>	Klein's Paranoid-Schizoid Position
<b>C.</b>	Freud's Genital stage
<b>D.</b>	Erikson's Autonomy vs Shame/doubt stage
<b>E.</b>	Freud's Phallic stage
<b>F.</b>	Freud's Oral stage
<b>G.</b>	Piaget's pre-operational stage
<b>H.</b>	Klein's Depressive Position
<b>I.</b>	Erikson's Trust vs Mistrust stage
<b>J.</b>	Freud's Anal stage
<b>K.</b>	Erikson's Identity vs Role Confusion stage

For each of the following examples, select the TWO options from the list above which most closely correspond.

Please select only TWO options for each question, but any option may be used more than once, if required.

**121.** A 3 year old boy is fond of saying "no". He is proud of his new ability to use the potty by himself and insists that his mother admires the results. **D J**

**122.** A 17 year old youth moves out of home and joins a gang. He forms a stormy relationship with a local girl who hangs around the gang house. **C K**

## Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

A.	Post-ictal confusion
B.	Pneumonia
C.	Panic disorder without agoraphobia
D.	Excessive caffeine intake
E.	Lewy body dementia with delirium
F.	Alcohol withdrawal
G.	Hyperthyroidism
H.	Cardiac arrhythmia
I.	Adjustment disorder with anxiety
J.	Delirium due to urinary tract infection
K.	Pick's disease with delirium

For each of the following examples, select the TWO most likely differential diagnoses from the list above.

Please select only TWO options for each question, but any option may be used more than once, if required.

**123.** An elderly man who copes quite well living alone with some visits from relatives is admitted for a geriatric review and shortly after admission develops urinary retention. He is catheterised, but four days later he becomes agitated and disorientated, calling out that there are rats running over his bed. **F J**

**124.** A middle-aged travelling sales manager realises that his drinking has become problematical so ceases alcohol and starts attending AA meetings every day. Although he enjoys socialising over coffee at the meetings, after a few days he becomes anxious, tremulous and sweaty and has difficulty getting off to sleep. The next day he finds it hard to drive due to fatigue so has several "energy drinks", but he feels worse by evening, with sweating, panic symptoms and a racing heart. **D F**

## Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

<b>A.</b>	Hirsutism
<b>B.</b>	Microcytosis
<b>C.</b>	Torticollis
<b>D.</b>	Dry mouth
<b>E.</b>	Severe headache
<b>F.</b>	Presbyopia
<b>G.</b>	Sialorrhoea
<b>H.</b>	Agranulocytosis
<b>I.</b>	Neck stiffness
<b>J.</b>	Rhinorrhoea
<b>K.</b>	Dysthesia
<b>L.</b>	Cogwheel rigidity
<b>M.</b>	Loss of accommodation
<b>N.</b>	Grand mal seizure

For each of the following examples, select the TWO most likely adverse effects from the list above.

Please select only TWO options for each question, but any option may be used more than once, if required.

125. Imipramine and chlorpromazine prescribed for a psychotic depression **D M**

126. Tranylcypromine and clomipramine prescribed together in error **E I**

## Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

<b>A.</b>	Hypothyroidism
<b>B.</b>	Family history of anxiety disorder
<b>C.</b>	Amphetamine abuse
<b>D.</b>	Prematurity at birth
<b>E.</b>	Loss of a parent before age eleven
<b>F.</b>	Family history of depression
<b>G.</b>	Dehydration
<b>H.</b>	Opiate dependency
<b>I.</b>	Hyperthyroidism
<b>J.</b>	High parental expressed emotion
<b>K.</b>	Female sex
<b>L.</b>	Birth by caesarian section
<b>M.</b>	Cigarette smoking
<b>N.</b>	Past cerebrovascular accident

For each of the following examples, select the TWO most likely risk factors from the list above.

Please select only TWO options for each question, but any option may be used more than once, if required.

**127.** A 69 year old patient taking risperidone is admitted acutely with rigidity, temperature of 38 degrees, confusion, and on investigation has an elevated creatinine kinase, leucocytosis and mildly elevated liver enzymes. **G N**

**128.** A 19 year old patient living at home with family and treated with fluphenazine decanoate is readmitted for the third time with a relapse of auditory hallucinations and fears of being controlled by radio waves from Mars. **C J**

## Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

<b>A.</b>	Acting out	<b>J.</b>	Humour
<b>B.</b>	Denial	<b>K.</b>	Resistance
<b>C.</b>	Altruism	<b>L.</b>	Repression
<b>D.</b>	Anticipation	<b>M.</b>	Passive aggressive behaviour
<b>E.</b>	Parallel process	<b>N.</b>	Reaction formation
<b>F.</b>	Isolation of affect	<b>O.</b>	Displacement
<b>G.</b>	Devaluation	<b>P.</b>	Rationalisation
<b>H.</b>	Projective identification	<b>Q.</b>	Projection
<b>I.</b>	Idealisation	<b>R.</b>	Splitting

For each of the following examples, select the TWO most appropriate descriptions of defences or psychotherapy processes from the list above.

Please select only TWO options for each question, but any option may be used more than once, if required.

**129.** A therapist finds himself feeling as though he is persecuting his patient by making interpretations. The patient avoids discussing his relationship with his highly critical father and therapy appears to have stalled, with many long silences. **H K**

**130.** A man who has difficulty sticking to a diet tells himself that he needs the calories in a hamburger so as to manage an exercise session at the gym. He has poor self-esteem but is well-liked by friends and workmates as he is amusing and wry. **J P**



**THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF  
PSYCHIATRISTS**

# CRITICAL ANALYSIS PROBLEMS

## **MOCK EXAMINATION**

**Paper II**

**2012**

## **DIRECTIONS**

**Do not answer questions in this booklet.**

**Use the separate answer sheet and pencil provided.**

**SELECT ONLY AS MANY ANSWERS AS INSTRUCTED**

**Note: in any question, selecting *more* answers than instructed  
will incur a mark of zero for that question**

## Critical Analysis Question **1** (20 marks)

Please read the abstract, excerpts, tables and figures, and answer the questions, based on this information and your other knowledge.

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

### **Social Cognitive Impairments and Negative Symptoms in Schizophrenia: Are There Subtypes With Distinct Functional Correlates?**

*Morris D. Bell, Silvia Corbera, Jason K. Johannesen, Joanna M. Fiszdon and Bruce E. Wexler. Schizophrenia Bulletin Advance Access, Oct 5, 2011*

#### **Abstract:**

Social cognitive impairments and negative symptoms are core features of schizophrenia closely associated with impaired community functioning. However, little is known about whether these are independent dimensions of illness and if so, whether individuals with schizophrenia can be meaningfully classified based on these dimensions (SANS) and potentially differentially treated. Five social cognitive measures plus Scale for the Assessment of Negative Symptoms (SANS) and Positive and Negative Syndrome Scale (PANSS) scores in a sample of 77 outpatients produced 2 distinct factors—a social cognitive factor and a negative symptom factor. Factor scores were used in a cluster analysis, which yielded 3 well-defined groupings—a high negative symptom group (HN) and 2 low negative symptom groups, 1 with higher social cognition (HSC) and 1 with low social cognition (LSC). To make these findings more practicable for research and clinical settings, a rule of thumb for categorizing using only the Mayer–Salovey–Caruso Emotional Intelligence Test and PANSS negative component was created and produced 84.4% agreement with the original cluster groups. An additional 63 subjects were added to cross validate the rule of thumb. When samples were combined (N = 140), the HSC group had significantly better quality of life and Global Assessment of Functioning (GAF) scores, higher rates of marriage and more hospitalizations. The LSC group had worse criminal and substance abuse histories. With 2 common assessment instruments, people with schizophrenia can be classified into 3 subgroups that have different barriers to community integration and could potentially benefit from different treatments.

#### **Methods:**

##### **Participants**

For the first phase, participants were 77 adult outpatients meeting the Diagnostic and Statistical Manual of Mental Disorders, Fourth revision, (DSM-IV) criteria for a diagnosis of schizophrenia or schizoaffective disorder, as assessed by the Structured Clinical Interview (SCID). Participants were recruited from an urban community mental health center (CMHC) for an ongoing study of cognitive training and supported employment and were referred by their clinicians because they expressed a desire to return to work. Participants were clinically stable (no hospitalizations, emergency room visits, homelessness, or substance abuse in the past 30 days), without evidence of current neurological disease, brain injury, or developmental disability, and proficient in English. For the second phase of the study, 63 participants from other psychiatric rehabilitation studies with similar inclusion/exclusion criteria performed by the authors at the CMHC, and the Veterans Affairs Connecticut Healthcare System, were used as a holdout sample to cross-validate the subgroup classifications established in the first sample.



**Table 1.** First Phase Participant Characteristics for Demographic, Clinical, and Social Cognitive Measures ( $N = 77$ )

	All subjects $N = 77$ $n$ (%)	HN (1) $n = 24$ $n$ (%)	HSC (2) $n = 27$ $n$ (%)	LSC (3) $n = 26$ $n$ (%)
Gender				
Male	43 (55.8)	18 (75)	13 (48.1)	12 (46.2)
Female	34 (44.1)	6 (25)	14 (51.9)	14 (53.8)
Marital status				
Married	4 (5.1)	1 (4.2)	2 (7.4)	1 (3.8)
Separated/divorced	11 (14.2)	0 (0)	6 (22.2)	5 (19.2)
Single	61 (79.2)	23 (95.8)	18 (66.7)	20 (76.9)
Widowed	1 (1.2)	0 (0)	1 (3.7)	0 (0)
Schizophrenia diagnosis				
Disorganized	1 (1.2)	1 (4.2)	0 (0)	0 (0)
Paranoid	30 (38.9)	8 (33.3)	10 (37.0)	12 (46.2)
Residual	12 (15.5)	6 (25.0)	3 (11.1)	3 (11.5)
Undifferentiated	8 (10.3)	4 (16.7)	3 (11.1)	1 (3.8)
Schizoaffective	25 (32.4)	5 (20.8)	10 (37.0)	10 (38.5)
Psychosis disorder NOS	1 (1.2)	0 (0)	1 (3.7)	0 (0)
Medications				
Atypical	50 (64.9)	15 (62.5)	20 (74.1)	15 (57.7)
Conventional	13 (16.8)	3 (12.5)	5 (18.5)	5 (19.2)
Both	4 (5.1)	3 (12.5)	0 (0)	1 (3.8)
None	10 (12.9)	3 (12.5)	2 (7.4)	5 (19.2)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Age	43.4 (10.4)	37.1 (10.8)	44.5 (8.8)	48.1 (8.8)
Estimated IQ <sup>a</sup>	91.3 (15.2)	94.1 (17.3)	97.7 (14.8)	82.2 (8.1)
Education	12.7 (2.4)	13.1 (3.2)	13.0 (2.0)	12.1 (1.8)
Age of onset	22.7 (9.9)	23.2 (7.7)	22.0 (11.8)	23.0 (9.9)
Lifetime # of hospitalizations	7.8 (9.07)	6.9 (10.4)	8.6 (9.7)	7.7 (7.0)
GAF	42.3 (7.9)	41.1 (6.5)	44.4 (9.4)	41.1 (7.1)
PANSS				
Positive	15.1 (5.4)	15.2 (5.3)	15.9 (5.8)	14.3 (5.3)
Negative	15.9 (6.6)	23.7 (3.9)	12.4 (4.0)	12.4 (4.3)
Cognitive	15.5 (4.3)	16.7 (4.9)	14.5 (4.1)	15.5 (3.8)
Hostility	6.4 (3.0)	6.5 (2.7)	6.5 (3.5)	6.2 (2.)
Emotional discomfort	8.8 (3.7)	9.5 (3.3)	8.7 (4.3)	8.3 (3.4)
SANS				
Flattening/blunting	7.8 (.89)	15.4 (6.9)	2.9 (3.7)	5.2 (6.2)
Alogia	3.4 (3.5)	7.2 (2.4)	1.3 (1.9)	2.1 (2.8)
Avolition/apathy	6.4 (4.9)	9.9 (4.8)	4.7 (4.2)	4.8 (4.1)
Anhedonia/asociality	11.5 (6.4)	15.7 (5.3)	9.2 (6.6)	10.1 (5.5)
Social cognition measures				
SAT-MC—score correct	10.8 (4.5)	11.4 (3.5)	13.4 (4.3)	7.7 (3.6)
BLERT—score correct	12.8 (3.3)	13.6 (2.5)	14.8 (2.6)	9.8 (2.6)
Hinting score	16.7 (2.2)	15.7 (2.4)	17.3 (2.0)	16.9 (2.0)
BORRTI egocentricity	61.4 (12.2)	59.1 (11.8)	57.4 (12.8)	67.6 (9.69)
MSCEIT-MC T-score	37.6 (13.2)	39.2 (12.6)	46.7 (8.8)	26.5 (9.1)

*Note:* HN (1) = High Negative; HSC (2) = Higher Social Cognition; LSC (3) = Low Social Cognition; GAF, Global Assessment of Functioning; PANSS, Positive and Negative Syndrome Scale; SANS, Scale for the Assessment of Negative Symptoms; SAT-MC, Social Attribution Task—Multiple Choice; BLERT, Bell Lysaker Emotion Recognition Test; BORRTI, Bell Object Relations Reality Testing Inventory; MSCEIT, Mayer-Salovey-Caruso Emotional Intelligence Test.

<sup>a</sup>Estimated IQ Wechsler Adult Scale of Intelligence III (WAIS-III) full scale deviation quotient for sum of scaled scores for vocabulary and block design dyad. ANOVA with Bonferroni post-hoc comparisons:  $F(2,74) = 8.92$ ;  $P < .01 = 1 > 3, 2 > 3$ .

**Table 4.** Differences in Social Functioning for Cluster Derived Groups and Cross-Validation Sample Using the Rule of Thumb Classification

	First Phase Sample (N = 77)					Cross-Validation Sample (N = 63)				
	Cluster Analysis Derived Groups					"Rule of Thumb" Derived Groups				
	HN (1) (n = 24) Mean (SD)	HSC (2) (n = 27) Mean (SD)	LSC (3) (n = 26) Mean (SD)	F/Chi square	Bonferroni post hoc comparisons <sup>a</sup>	HN (1) (n = 12) Mean (SD)	HSC (2) (n = 19) Mean (SD)	LSC (3) (n = 32) Mean (SD)	F/Chi square	Bonferroni post hoc comparisons <sup>a</sup>
Age of onset	23.2 (7.7)	22.0 (11.8)	23.0 (9.9)	.106	.900	25.2 (9.3)	18.6 (6.0)	24.0 (8.8)	3.31	.043
GAF	41.1 (6.5)	44.48 (9.4)	41.1 (7.1)	1.56	.216	40.0 (7.9)	44.1 (9.0)	42.0 (8.6)	.870	.424
QLS total	42.7 (15.8)	55.0 (17.1)	50.0 (22.1)	2.82	.066	51.3 (10.6)	63.4 (23.2)	54.8 (20.0)	1.67	.196
QLS interpersonal	15.2 (9.9)	21.4 (8.9)	19.9 (10.2)	2.71	.073	15.1 (5.3)	22.4 (10.3)	20.3 (10.0)	2.26	.112
QLS intrapsychic	19.6 (6.6)	26.1 (7.9)	22.6 (8.9)	4.22	.018	22.4 (5.6)	27.8 (8.1)	24.4 (8.8)	1.848	.166
QLS objects/activities	6.7 (1.8)	7.0 (2.1)	5.8 (2.2)	2.33	.104	7.9 (2.4)	8.1 (1.8)	6.8 (2.1)	2.68	.076
Marital Status	Count (%)	Count (%)	Count (%)			Count (%)	Count (%)	Count (%)		
Single	23 (95.8)	18 (66.7)	20 (79.2)	6.69	.035	9 (75.0)	12 (63.2)	20 (62.5)	0.644	.725
Ever Married	1 (4.2)	9 (33.3)	6 (20.8)			3 (25.0)	7 (36.8)	12 (37.5)		ns
# Lifetime hospitalizations less than 6	16 (66.7)	12 (44.4)	15 (57.7)			n = 62 <sup>b</sup>	4 (21.1)	16 (51.6)		ns
6 or more	8 (33.3)	15 (55.6)	11 (42.3)			5 (41.7)	15 (78.9)	15 (56.5)		ns
# Lifetime criminal arrests (n = 76) <sup>b</sup>				6.81	.033				7.88	.019
2 or less	17 (70.8)	22 (81.5)	12 (48.0)			n = 21 <sup>b</sup>	7 (77.8)	1 (14.3)		2>1>3
More than 2	7 (29.2)	5 (18.5)	13 (52.0)			1 (20.0)	2 (22.2)	6 (85.7)		3>2>1
Lifetime substance abuse				0.384	.825				6.29	.043
Yes	17 (70.8)	21 (77.8)	20 (76.9)			n = 34 <sup>b</sup>	8 (80.0)	16 (100.0)		3>2>1
No	7 (29.2)	6 (22.2)	6 (23.1)			3 (37.5)	2 (20.0)	0 (0.0)		1>2>0

Note: HN (1) = High Negative Symptoms; HSC (2) = Higher Social Cognition; LSC (3) = Low Social Cognition GAF: Global Assessment of Functioning Scale; QLS = Quality of Life Scale.

<sup>a</sup>Mean differences are significant at the 0.05 level.

<sup>b</sup>Absence of criminal or substance abuse data for some of the participants.

## Critical Analysis Question 1 (20 marks)

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

In each of the following questions, select the TWO most accurate options from the list of answers.

Each correct answer is worth 2 (two) marks.

### 1.1 Which of the following best describe this study? (4 marks)

Please select ONLY two options: more than two answers will incur a mark of zero

<b>A</b>	Case control study
<b>B</b>	Focused survey of patients with psychosis
<b>C</b>	Experimental study of cognitive training and supported employment as interventions
<b>D</b>	Prognostic study of causes of poorer outcomes in schizophrenia or schizoaffective disorder
<b>E</b>	<b>Factor analysis of questions from a survey</b>
<b>F</b>	Latent class analysis of questions from a survey
<b>G</b>	<b>Focused survey of patients with schizophrenia or schizoaffective disorder</b>

E and G are correct

### 1.2 Which patients were included in the study? (4 marks)

Please select ONLY two options: more than two answers will incur a mark of zero

<b>A</b>	A random selection of new referrals to a community mental health centre who had schizophrenia or schizoaffective disorder as confirmed using the SCID
<b>B</b>	<b>Stable outpatients with schizophrenia or schizoaffective disorder as confirmed by clinical reinterview using the SCID</b>
<b>C</b>	Male patients with schizophrenia or schizoaffective disorder and recent substance abuse
<b>D</b>	Inpatients with schizophrenia or schizoaffective disorder
<b>E</b>	Patients undergoing their first episode of schizophrenia or schizoaffective disorder
<b>F</b>	Outpatients with a PANSS positive symptoms score of $\geq 21$
<b>G</b>	<b>Patients from a community mental health centre without recent hospitalization or substance abuse, who consented to the study protocol</b>

B and G are correct

**1.3 There are differences between the groups as seen in Table 1. Which of the following statements can be justified? (4 marks)**

Please select ONLY two options: more than two answers will incur a mark of zero

<b>A</b>	There is a significant difference in the use of atypical medications
<b>B</b>	<b>The premorbid intelligence of this cohort appears lower than one would expect but little weight can be given to this result as it is only an estimated IQ</b>
<b>C</b>	The number of hospitalisations is a reasonable proxy measure for severity that is transferable to any psychiatric service
<b>D</b>	Considerably more females than males were in the HN group
<b>E</b>	<b>The lack of tests of significance is a methodological weakness</b>
<b>F</b>	The age of onset in the HSC group is significantly lower

**B and E are correct**

**1.4 With reference to the First Phase Sample in Table 4, which of the following statements are correct? (4 marks)**

Please select ONLY two options: more than two answers will incur a mark of zero

<b>A</b>	<b>The study needed a Bonferroni correction because of the multiple number of quasi-independent comparisons that were used</b>
<b>B</b>	Mean differences found between the 3 groups after the Bonferroni correction are significant to a high level of statistical significance
<b>C</b>	Following the Bonferroni correction, there is evidence of significantly more substance abuse behaviour in the LSC group
<b>D</b>	<b>Following the Bonferroni correction, there is some evidence that more of the HSC group had ever been married</b>
<b>E</b>	Following the Bonferroni correction, there is evidence of significantly more antisocial behaviour in the HSC group
<b>F</b>	There is no evidence, after performing a Bonferroni correction, of any difference between the 3 groups on the Quality of Life Scale

**A and D are correct**

"We then combined the holdout sample with the original sample used to produce the cluster groupings. With greater statistical power, a few additional differences were observed. Somewhat counter to expectation, compared with both other groups, the HSC group had an earlier reported age of onset and significantly more hospitalizations." [excerpt from Discussion]

**1.5 Based on this and other data available in this question, which of the following statements are most likely to be justified? (4 marks)**

Please select ONLY two options: more than two answers will incur a mark of zero

<b>A</b>	The HSC group had significantly higher estimated IQ and would thus have been more able to seek out treatment
<b>B</b>	The earlier age of onset in the HSC group confers a better prognosis
<b>C</b>	<b>The HSC group had greater social engagement and may thus have been more able to seek out treatment</b>
<b>D</b>	The higher "hostility" scores on PANSS are likely to have led to the HSC group's increased hospitalizations
<b>E</b>	<b>The HD and LSC groups had poorer social engagement and may thus not have come to attention as much, resulting in fewer hospitalizations</b>

**C and E are correct**

## Critical Analysis Question **2** (20 marks)

Please read the abstract, excerpts, tables and figures, and answer the questions, based on this information and your other knowledge.

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

### Group Cognitive Behaviour Therapy for Military Service-Related Post-Traumatic Stress Disorder:

Andrew Khoo, Michael T. Dent and Tian P. S. Oei (Aust N Z J Psychiatry Aug 2011)

#### Abstract:

**Objective:** The aim of this study was to assess 12 month outcomes of Australian combat veterans with post-traumatic stress disorder (PTSD) who participated in a 6 week group based CBT programme at the Toowong Private Hospital. The study population included 496 consecutive admissions to the programme between 1999 and 2008.

**Method:** Self-report measures of PTSD, depression, anxiety, anger, alcohol use, relationship satisfaction and quality of life parameters were collected at intake and 3, 6 and 12 months post intake.

**Results:** Statistically significant and sustained improvements were noted in 12 month outcome measures for PTSD, depression, anxiety, alcohol use, anger, and quality of life. PTSD symptom reduction occurred consistently each year for 9 years and exhibited an aggregated effect size of 0.68.

**Conclusions:** This naturalistic research demonstrates that treatment administered under clinical conditions produces unequivocal magnitudes of positive change in terms of PTSD symptoms when compared with existing efficacy data in individual and group treatments. Further, these symptomatic gains are sustainable and consistently reproducible. The benefits noted from group therapy were seen as independent of whether or not individual treatment was in place.

#### Method: [excerpts]

**Participants** A total of 496 veterans participated in a group-based PTSD programme from 1999 to 2008. All veterans were formally diagnosed with chronic PTSD by their referring psychiatrists. The mean Clinician-Administered PTSD Scale (CAPS) score at assessment was 77.49 (SD = 18.35), indicating significant PTSD symptomatology. Self-report data at intake indicated 72.3% of veterans presented with depressive symptoms (Hospital Anxiety and Depression Scale (HADS) depression), 90.9% with anxiety symptoms (HADS anxiety) and 65.9% with significant alcohol abuse (Alcohol Use Disorders Identification Test (AUDIT)). The majority of veterans (75%) were unable to work in a full-time capacity because of severity of symptoms.

All veterans were male apart from one. Veterans' ages ranged from 25 years to 74 years, with a mean age of 53 years, median age of 55 years and mode age of 57 years. Nearly 80% had served in the army, 18% in the navy and 2% in the air force. The majority of veterans served in the Vietnam conflict (68%), with the remainder serving in combat zones prior to Vietnam (e.g. Korea, Malaya) and various peacekeeping operations post Vietnam (e.g. East Timor, Somalia, Rwanda, Iraq, Afghanistan). Most veterans were married or in a long-term relationship (79%).

**Measures** Participants completed a variety of mental health self-report questionnaires contained within the Australian Centre for Posttraumatic Mental Health (ACPMH) outcome measures protocol. The questionnaires targeted symptoms of PTSD, marital satisfaction, alcohol use, anger, depression, anxiety and quality of life. The questionnaires were administered on four occasions: intake, discharge, 3 months post treatment and 9 months post treatment. All participants who attended assessment occasions were administered all questionnaires. A brief description of each questionnaire is described below.



### **Procedure [excerpt]**

This programme employs a predominantly cognitive behavioural approach. The CBT is group-based and utilizes a comprehensive manual, homework tasks, video presentations, and numerous field trips. Additionally, veterans receive individual sessions on a weekly basis with an allied health clinician, have access to individual psychiatric input, and receive approximately 20% of sessions with their partners.

...The programme incorporated an initial 6 week intensive phase where veterans attended 8.30 a.m. to 4.00 p.m. 4 days per week for 6 weeks (total 24 days). The intensive phase was followed by fortnightly 2 day sessions over a 6 week period (total 6 days). Veterans then attended 1 day follow-up sessions at 3 months and 9 months post-intensive phase (total 2 days). From 2000 to 2008, 64 groups completed the programme.

### **Results [excerpts]**

#### **PCL missing data (completers and non-completers)**

Of the 496 veterans who commenced the programme, approximately 24% did not attend the final follow up session (9 months data point) and therefore did not complete the programme or questionnaires at that point. Hence, no data was available to examine non-completer outcome. Completers were defined as participants who completed both the PCL at intake and 9 months post treatment. Non-completers were defined as participants completing the PCL at intake, but not at 9 months post treatment.

There was no statistically significant difference between completers and non-completers with respect to intake PCL scores ( $p=0.298$ ). When utilizing a conservative 'last observation carried forward' (LOCF) type technique (by carrying forward the non-completers' intake PCL score to the 9 months data point), we continued to demonstrate an effect size score in the moderate range ( $d=0.5$ , down from 0.7). Investigation of skewness of data within the two groups indicated mild negative skew for both populations (completers:  $-0.654$ , non-completers:  $-1.057$ ), with neither group falling in the 'severe range' ( $>-0.2$ ), as defined by Hildebrand.

No statistically significant differences were noted between completers and non-completers with respect to symptom measures at intake; HADS depression ( $p=0.259$ ), HADS anxiety ( $p=0.8$ ), AUDIT ( $p=0.97$ ) and DAR ( $p=0.296$ ). No significant difference was noted on marital status ( $p=0.492$ ) between the two groups. A statistically significant difference with respect to age ( $p<0.001$ ) was noted with the non-completer group having a younger mean age.

### **Effect sizes**

Change scores were determined by outcome differences on a variety of clinical symptom measures from intake to 9 months post treatment. Strength or impact of group treatment was determined by effect sizes (Cohen's  $d$ ), calculated by dividing the changed score by the pooled standard deviation. In clinical terms, Cohen (1975) indicated 0.5 as a moderate change and 0.8 as a large change.

As noted in Table 1, most effect size results were in the moderate strength range (0.4 – 0.7). A small effect size was associated with a measures of marital satisfaction (ADAS:  $d=0.2$ ).

### **Dependent variables**

Outcome measures were grouped into two separate components. The first group combined measures which reflected symptom change, where improvement was noted by a decrease in test scores (PCL, HADS Anxiety, HADS Depression, DAR). The second group combined measures which reflected quality of life issues where an increase in test scores indicated improvement (WHOQOL-Bref Physical, WHOQOL-Bref Psychological, WHOQOL-Bref Social, ADAS). Both groups were subjected to separate repeated measures MANOVA analyses. Multivariate analysis was chosen to reduce the likelihood of Type I error expected with a number of repeated analyses of variance.

## Critical Analysis Question 2 (20 marks)

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

### 2.1 What might some methodological advantages be to the study design as described in the Abstract and Methods excerpts: (3 marks)

(Please select ONLY THREE options from the list below: more than three answers will incur a mark of zero)

A	Group CBT has been shown to be more effective in treating depressive and anxiety symptoms in PTSD than individual CBT
B	<b>Outcome data was gathered regularly across a long time period (9 years)</b>
C	<b>The naturalistic design is closer to real-world conditions thus the results are more applicable to real clinical environments</b>
D	<b>The naturalistic design is ethically preferable as no participants are allocated to a control or placebo group</b>
E	The self-report design increases validity as information is not collected second-hand
F	The study as described takes less time to complete than a randomized controlled trial
G	There is a reduced risk of researcher bias in a naturalistic study design

**B C D are correct**

### 2.2 What might some methodological disadvantages be to the study design as described in the Abstract and Methods excerpts: (3 marks)

(Please select ONLY THREE options from the list below: more than three answers will incur a mark of zero)

A	It is more complicated to obtain Ethics Committee approval for naturalistic studies
B	The inclusion of veterans with significant alcohol abuse reduces the applicability of the study in the real clinical environment
C	<b>The lack of a control group means that definitive cause and effect conclusions cannot be drawn from the results</b>
D	The naturalistic study as described is less expensive than a randomized controlled trial
E	The number of study participants is likely to be too small to show significant changes
F	<b>The participants had specific characteristics so the results cannot accurately be applied to other patient groups (e.g. civilians, women)</b>
G	<b>The use of self-report questionnaires reduces validity as information collected is subjective and may be unreliable</b>

**C F G are correct**

### 2.3 Regarding the Procedure and Results excerpts, which of the following statements are incorrect?: (3 marks)

(Please select ONLY THREE options from the list below: more than three answers will incur a mark of zero)

A	Although flawed, the LOCF technique avoids the loss of all data from drop-outs
B	<b>An effect size of 0.1 using Cohen's d indicates a large change</b>
C	An 'intention to treat' analysis was performed
D	<b>Cohen's d measure of effect size cannot be used with t-tests</b>
E	<b>MANOVA analysis was used to reduce likelihood of false negatives</b>
F	MANOVA analysis was used to reduce likelihood of false positives
G	MANOVA is a generalized extension of univariate analysis of variance (ANOVA) used in situations where there are two or more dependent variables

**B D E are correct**

Table 1. Univariate test results for symptom change and quality of life components; means, standard deviations at each assessment point; effect sizes (Cohen's d)						
Symptom change outcome measures	Intake	Discharge	3 months post treatment	9 months post treatment	Univariate F value	Effect sizes Intake to 9 months
PCL total score	M = 63.65 (10.72)	M = 55.30 (12.65)	M = 57.12 (11.82)	M = 55.75 (12.19)	F(3, 408) = 31.69, p = < 0.001	d = 0.7
HADS Anxiety	M = 14.03 (3.41)	M = 11.88 (3.53)	M = 12.54 (3.52)	M = 11.97 (3.95)	F(3, 408) = 22.38, p = < 0.001	d = 0.6
HADS Depression	M = 11.79 (3.81)	M = 9.74 (4.11)	M = 10.26 (3.68)	M = 9.76 (4.08)	F(3, 441) = 16.02, p = < 0.001	d = 0.5
DAR	M = 31.88 (13.13)	M = 26.03 (13.48)	M = 26.85 (13.64)	M = 24.88 (13.97)	F(3, 408) = 18.84, p = < 0.001	d = 0.5
WHOQOL-Bref Physical	M = 39.81 (14.50)	M = 45.80 (15.34)	M = 44.56 (15.49)	M = 47.11 (17.23)	F(3, 417) = 19.58, p = < 0.001	d = 0.5
WHOQOL-Bref Psychological	M = 36.42 (13.39)	M = 44.15 (15.24)	M = 41.39 (14.90)	M = 43.64 (16.15)	F(3, 441) = 19.27, p = < 0.001	d = 0.4
WHOQOL-Bref Social	M = 35.59 (18.01)	M = 47.13 (18.58)	M = 42.77 (18.75)	M = 43.92 (20.01)	F(3, 441) = 22.13, p = < 0.001	d = 0.4
ADAS	M = 17.50 (6.24)	M = 19.83 (6.15)	M = 18.90 (6.55)	M = 18.91 (6.54)	F(3, 412) = 14.04, p = < 0.001	d = 0.2
PCL, PTSD Checklist; HADS, Hospital Anxiety and Depression Scale, ADAS, Abbreviated Dyadic Adjustment Scale; DAR, Dimensions of Anger Reaction; WHOQOL-Bref, Brief World Health Organization Quality of Life Instrument.						

**2.4 Regarding Table 1 as above, which of the following statements are correct? (4 marks)**  
(Please select ONLY FOUR options from the list below: more than four answers will incur a mark of zero)

<b>A</b>	<b>Results for all eight of the measures have statistically significant p values</b>
<b>B</b>	<b>Higher scores on the WHOQOL-Bref scales after 9 months indicate improved coping and quality of life</b>
<b>C</b>	Lower scores on the PCL, PTSD Checklist, HADS and DAR scales after 9 months indicate worsening of symptoms
<b>D</b>	P<0.001 means that there is a 99% chance that the results are not due to chance
<b>E</b>	<b>P&lt;0.001 means that there is a 99.9% chance that the results are not due to chance</b>
<b>F</b>	P<0.001 means that there is a 99.99% chance that the results are not due to chance
<b>G</b>	<b>The effect size of the PCL score change is large</b>

**A B E G are correct**



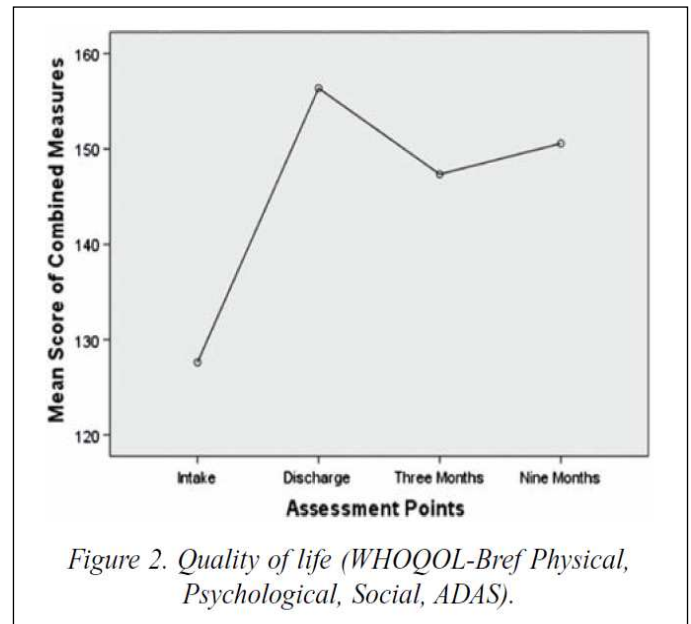
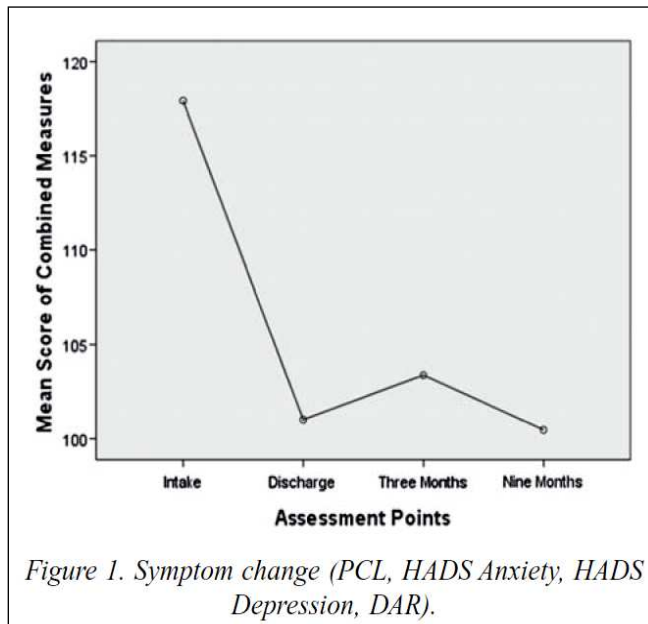


Table 2. Remitters, responders and non-responders on the PCL	
Outcome classification	Percentage frequency
Remitter (clinically significant and positive reliable change: drop of at least 5 points on the PCL, and score below 50)	20.5%
Responder (positive reliable change only: drop of at least 5 points on the PCL)	39.5%
Non-responders (nil clinical significance, nil reliable change, or deterioration of PTSD symptoms)	40%

**2.5 Regarding Figure 1, Figure 2 and Table 2 as above, which of the following statements are correct? (4 marks)**

(Please select ONLY FOUR options from the list below: more than four answers will incur a mark of zero)

<b>A</b>	<b>21% of patients' symptoms responded with a score below 50 on the PCL</b>
<b>B</b>	40% of patients' symptoms responded with a score below 50 on the PCL
<b>C</b>	60% of patients' symptoms responded with a score below 50 on the PCL
<b>D</b>	<b>60% of patients dropped at least 5 points on the PCL scale</b>
<b>E</b>	<b>The greatest gains on the WHOQOL-Bref and ADAS Scales occurred within the first 3 months of therapy</b>
<b>F</b>	The greatest gains on the WHOQOL-Bref and ADAS Scales occurred within the first 9 months of therapy
<b>G</b>	<b>The greatest symptomatic gains on the PCL, PTSD Checklist, HADS &amp; DAR scales occurred within the first 3 months of therapy</b>
<b>H</b>	The greatest symptomatic gains on the PCL, PTSD Checklist HADS & DAR scales occurred within the first 9 months of therapy

**A D E G are correct**

**2.6 Which of the following are not confounding factors which might reduce the validity of this study's results? (3 marks)**

(Please select ONLY THREE correct options from the list below: more than three answers will incur a mark of zero)

<b>A</b>	Different demographic features in the actual therapy groups themselves
<b>B</b>	Different efficacy of the therapy groups due to therapist skill level
<b>C</b>	<b>No randomization to different treatment groups in this study</b>
<b>D</b>	Other environmental traumas affecting participants during the study
<b>E</b>	Participants being treated with varying types and doses of psychotropic medication
<b>F</b>	<b>The lack of blinding in this study</b>
<b>G</b>	<b>There was no control or comparison group in this study</b>
<b>H</b>	Variable compliance of participants with their psychotropic medication regimes
<b>I</b>	Whether group members were also receiving differing types of individual therapy

**C F G are correct**