



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

MOCK WRITTENS EXAMINATION

(from the Auckland New Zealand program)

December 2009 / May 2010

**PAPER I
(new format revised version for May 2010)**

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.

Each question is worth 1 mark.

- A. Bulimia nervosa
- B. Body Dysmorphic Disorder
- C. Hypochondriasis
- D. Acute Stress Disorder
- E. Depersonalization disorder
- F. Binge Eating Disorder
- G. Factitious disorder With Predominantly Psychological Signs and Symptoms
- H. Amnestic Disorder Due to Head Trauma
- I. Dissociative Identity Disorder
- J. Delusional disorder, somatic type
- K. Anorexia nervosa
- L. Acute Posttraumatic Stress Disorder
- M. Factitious disorder With Predominantly Physical Signs and Symptoms
- N. Delusional disorder
- O. Dissociative amnesia
- P. Somatization Disorder
- Q. Conversion Disorder

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.**

1. Three weeks after a near-fatal car accident in which his leg was broken, a young man still suffers from nightmares and intrusive memories of the crash. **D**
2. A 40 y.o. woman is convinced that she is infested with parasites which crawl just underneath her skin, which is covered in scratches and raw lesions. **J**
3. A plump young woman admits to bingeing on cereals or ice-cream when feeling low. The only consequence afterwards is a worsening of her mood. **F**
4. A 35 y.o. man presents to the Emergency Department with abdominal pain. There is evidence of several prior surgeries with scarring on his abdomen. **M**
5. A 27 y.o. man assaults his dentist after the dentist refuses any further appointments to grind down his right upper molars for complaints of malocclusion. **J**

Extended Matching Questions

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- A. alcohol
- B. cannabis
- C. tobacco
- D. opiates
- E. caffeine
- F. cocaine
- G. solvents
- H. methamphetamine
- I. benzodiazepines
- J. methylenedioxymethamphetamine
- K. benztropine
- L. lysergic acid
- M. phencyclidine
- N. ketamine
- O. psilocybin

Which of the substances listed above, if abused, is the **MOST** likely to be the physical cause of each of the following presentations.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

- 6. Shane presents to the Emergency Department in a paranoid state, with open sores on his face from scratching. **H**
- 7. Four days after admission, Joseph becomes disoriented and is terrified that there is a tiger lurking underneath his bed waiting to attack him. **A**
- 8. Muriel, a retired freelance journalist, develops emphysema. **C**
- 9. Sandra, a 55 y.o. schoolteacher suffering from depression, is brought to the Emergency Department unconscious and barely breathing. **I**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Prosopagnosia
- B. Palinopsia
- C. Tactile hallucination
- D. Simultanagnosia
- E. Autotopagnosia
- F. Dysaesthesia
- G. Derealisation
- H. Micropsia
- I. Depersonalisation
- J. Pareidolia
- K. Déjà vu
- L. Visual agnosia
- M. Anosognosia
- N. Jamais vu
- O. Dyscalculia
- P. Dysgeusia

Which symptom 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.**

- 10. A girl lies on her back in the grass, seeing faces in the clouds passing overhead. **J**
- 11. A man in a neurological ward can copy a picture of a clockface but cannot say what the picture represents. **L**
- 12. A shopkeeper loses her ability to make change and to write clearly, and cannot say whether you are holding up your thumb or index finger. **O**
- 13. A man has frequent trance-like states in which objects around him seem very distant and far away. **H**
- 14. An elderly woman in a confused and disoriented post-operative state tries to brush insects off her skin, saying that she can feel them crawling on her. **C**
- 15. a man experiences intense burning pain when his leg is touched with cotton wool. **F**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Vascular dementia
- B. Carbon monoxide poisoning
- C. Rett's syndrome
- D. Asperger's syndrome
- E. Infantile autism
- F. Parkinson's disease
- G. Wernicke's encephalopathy
- H. Pick's disease
- I. Vitamin B12 deficiency
- J. Creutzfeldt-Jakob disease
- K. Lewy body dementia
- L. Alzheimer's dementia
- M. Juvenile onset Huntingdon's disease
- N. Binswanger's disease

Which condition listed above is the **MOST** likely to result in each of the following examples.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

16. Seizures, rigidity, jerky involuntary movements **M**

17. Lateral gaze paralysis, ataxia and confusion **G**

18. Loss of anterograde memory **B**

19. Drooling and micrographia **F**

Extended Matching Questions

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

Each question is worth 1 mark.

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

Which diagnosis listed above is the **MOST** likely to be demonstrated by each of the following Consultation-Liaison presentations.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

- 20. Marilyn is referred from neurology as her EEGs have been negative. She describes frequent episodes during which she enters a trance-like state and during which noises become loud, objects seem too close and her vision gets a yellowish tinge. **L**
- 21. Jodie, a Year 12 student, has been crying and complains of being unable to sleep or eat for a few days since failing to qualify for the national diving team. **M**
- 22. Barbara is referred from the ENT clinic as she has suddenly become unable to speak. On assessment she seems calm and euthymic, although her husband demands angrily that she be cured. It appears that prior to her speech problem they were having a lot of arguments. **D**
- 23. A young woman on a medical ward has taken a serious overdose. She tells you that the Charge Nurse is “a bitch” and wants to discharge her, but that her consultant and main daytime nurse want her to stay until she is no longer suicidal. **P**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Benztropine 2 mgs orally
- B. Nortriptyline and lithium carbonate
- C. Maintenance electroconvulsive therapy
- D. Risperidone Consta
- E. Olanzapine short-acting injection
- F. Tranylcypromine
- G. Nortriptyline
- H. Lithium carbonate
- I. Citalopram
- J. Mirtazepine
- K. Benztropine injection 2 mgs intravenously
- L. Cognitive behavioural therapy and fluoxetine
- M. Midazolam
- N. Venlafaxine
- O. Lamotragine
- P. Benztropine injection 2 mgs intramuscularly
- Q. Diazepam
- R. Olanzapine oral wafers

Which treatment option listed above is the **MOST** appropriate or evidence-based choice in each of the following examples.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

- 24. Jim, aged 37, is recovering from a resistant melancholic depression which required ECT before responding. He now needs an ongoing outpatient treatment regime. **B**
- 25. Ming, a 19 y.o. Chinese student admitted with schizophrenia, develops a severe and painful torticollis the weekend after commencing risperidone. **K**
- 26. Thelma has a history of persistent lowered mood with two past episodes of major depression. She recently recovered from a hypomanic episode and is now becoming dysthymic again. **O**
- 27. Mario is brought to hospital by the police acutely aroused and struggling violently, with grandiose delusions and pressured speech, shouting about being Jesus. **E**
- 28. Sophia presents with longstanding social phobia, having become almost house-bound and very reliant on her husband. **F**
- 29. Henry, aged 79, develops muscle twitching while still unconscious after his ECT treatment – reapplication of the EEG shows this to be a tardive seizure. **M**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Sensory Memory
- B. Short-Term Memory
- C. Procedural Memory
- D. Schemata
- E. Semantic Memory
- F. Propositions
- G. Visual Memory
- H. Episodic memory
- I. Programmes
- J. Facial Memory
- K. Imagery
- L. Verbal Memory
- M. Paradigms
- N. Phonological loop
- O. Autobiographical memory

Select the **MOST** likely aspect of memory as listed above, which is demonstrated by each of the following examples:

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

30. After her head injury, Jo, a grad student, still understands mathematical theory. **E**
31. Matt can recall three objects at five minutes. **B**
32. Tim has not ridden a bicycle for many years but after a wobbly start, he manages quite well. **C**
33. John remembers a phone number by muttering it to himself while searching for a pen and paper. **N**
34. A sparkler firework on New Year's Eve makes lines of light when swung about. **A**
35. George can recall the capital cities of several countries. **E**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Intellectualisation
- B. Flight into health
- C. Negative transference
- D. Idealisation and devaluation
- E. Regression
- F. Positive transference
- G. Manic defence
- H. Rationalisation
- I. Repression
- J. Reaction formation
- K. Countertransference
- L. Sublimation

Which psychological process 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.

36. Miriam has romantic daydreams about her new therapist and brings him an apple as a present, saying jokingly, "Not that I *want* to keep the doctor away!" **F**
37. Mark tells his psychotherapist that he has started seeing a naturopath every week who is "extremely understanding and helpful – and very practical." **D**
38. Annabel writes to her therapist: "Sorry I can't make it to the last ten sessions, but I'm feeling fine now so I don't need any more therapy." **B**
39. Raj goes home after therapy with a needy new patient feeling irritable and as though he is suffocating. **K**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Panic disorder without agoraphobia
- B. Social phobia
- C. Generalised anxiety disorder
- D. Acute stress disorder
- E. Panic disorder with agoraphobia
- F. Specific phobia
- G. Post-traumatic stress disorder
- H. Obsessive compulsive disorder
- I. Separation anxiety disorder
- J. Substance-induced anxiety disorder

Which anxiety disorder 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.

40. Helen, aged 15, is very shy and is unable to manage a presentation to her class on a project. At home she is happy and settled. She avoids interactions with schoolmates by isolating herself in the library during breaks. **B**
41. Alofa, aged 14, survives a tsunami but even three months afterwards he still has bad dreams with broken sleep, and is tense and irritable. **G**
42. Sharlene, aged 7, becomes reluctant to be away from her mother or to go to school, after her parents' divorce. **I**
43. Chris, aged 10, becomes nervous and tense, with initial insomnia, after commencing treatment for ADHD. **J**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Commence antipsychotic medication
- B. Get a full blood count
- C. Order an ECG
- D. Give parenteral thiamine
- E. Get a medication serum level
- F. Commence Mental Health Act process so as to detain
- G. Arrange an urgent family meeting
- H. Give oral thiamine
- I. Educate and reassure
- J. Arrange family therapy
- K. Order an EEG
- L. Cease the medication
- M. Commence an SSRI
- N. Refer to a neurologist
- O. Commence CBT

For each of the following presentations, select the **MOST** important next step in the management plan.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

44. Abby, a 22 y.o., presents with a 4 month history of panic attacks which started after she got a new job as a secretary. She has no idea what is happening to her and expresses the fear that she is "going mad". **I**
45. Damian develops an eosinophilia and ECG abnormalities while being titrated onto clozapine. **L**
46. Bruce, a 55 year old bartender, develops delirium tremens after being hospitalised for a fractured tibia. **D**
47. Mohinder, aged 19, is admitted acutely from a night shelter with symptoms suggestive of schizophrenia. He apparently left home two months ago and had been living rough. He is calm and amenable to admission but is very thought disordered. **G**
48. Judy has a grand mal seizure during treatment with nortriptyline and fluoxetine. **L**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. AIMS
- B. HDRS
- C. EAT
- D. Y-BOCS
- E. PANSS
- F. CAGE
- G. Verbal fluency
- H. HoNOS
- I. YMRS
- J. Thematic Apperception Test (TAT)
- K. Wisconsin Card Sort
- L. MADRS
- M. BDI
- N. GATES

Which test listed above BEST fits the description below.

Please select only ONE option, BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.

- 49. A test used prior to psychotherapy that aims to identify unconscious issues **J**
- 50. An outcome assessment for mental health service users **H**
- 51. A detailed assessment of extrapyramidal side-effects **N**
- 52. A projective test used by psychologists **J**
- 53. A test that quantifies manic symptoms **I**
- 54. A test that assesses a patient's ability to set-shift **K**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Cluttering
- B. Clanging
- C. Palilalia
- D. Derailment
- E. Semantic paraphasia
- F. Knight's move thinking
- G. Logorrhoea
- H. Perseveration
- I. Neologism
- J. Word salad
- K. Phonemic paraphasia
- L. Tangentiality
- M. Echolalia

Which aspect of phenomenology listed above are BEST demonstrated by each of the following examples.

Please select only ONE option, BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.

55. "Hey doc, rock, me old cock, how's it going?" **B**

56. [registrar]: "Hello James, how are you today"
[patient]: "...today..."
[registrar]: "James? Are you able to talk to me?"
[patient]: "...talk to me..." **M**

57.  **H**

58. [patient]: "He went through that window."
[registrar]: "Do you mean he went through that door, Mrs Watson?"
[patient]: "Yes, that's what I said." **E**

59. "And, as in uffish thought he stood," **I**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Implosion therapy
- B. "ABC" analysis
- C. Social skills training
- D. Shaping
- E. Decelerating therapy
- F. Use of interoceptive cues
- G. Activity scheduling
- H. Aversion therapy
- I. Flooding
- J. Imaginal exposure
- K. In vivo desensitisation
- L. Habit reversal

Which Behavioural Therapy term listed above is the **BEST** demonstrated by the following examples.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

- 60. Shawn is only three so he is put into time out in the spare room for just three minutes. **E**
- 61. In the final phase of therapy after several months, Margie's therapist goes with her to the supermarket, encouraging her all the while to use controlled breathing so as to relax about the trolleys being contaminated. **K**
- 62. Ginnie earns a trip to the beach at the weekend after earning 5 gold stars for going to bed without a fuss, most nights across the previous week. **D**
- 63. The practice of giving patients with alcoholism liquor to which an emetic had been added is now frowned on, and was never very effective. **H**
- 64. A psychologist asks her client to envisage waiting in the lounge to board an aeroplane, then helps her to manage the resulting anxiety with muscle relaxation. **J**
- 65. After discussion, Ron and his therapist clarify that it was being teased about his height that triggered the rage, and that after he'd hit the guy in the pub he'd felt sick to his stomach and coped by taking the overdose. **B**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Deductive reasoning
- B. Autonomy
- C. Ethical relativism
- D. Justice
- E. Teleological reasoning
- F. A categorical moral imperative
- G. A paradigm shift
- H. Beneficence
- I. Inductive reasoning
- J. Utilitarianism
- K. Practical wisdom
- L. Hermeneutics
- M. Compassion
- N. Empirical falsifiability

Which aspect of ethical or scientific thinking 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.

66. The heliocentric solar system has now become “common knowledge” **G**

67. “If it can’t be tested, it’s voodoo, not science.” **N**

68. The importance of confidentiality in treating patients. **B**

69. Rationing of mental health service resources. **J**

70. Equal access to mental health services for people of all ethnicities. **D**

71. “The end justifies the means” **J**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Sleep terror disorder
- B. Primary Hypersomnia
- C. Caffeine induced sleep disorder (insomnia)
- D. Catalepsy
- E. Sleep disorder due to a general medical condition
- F. Periodic Leg Movement Disorder
- G. Insomnia related to an Axis II disorder
- H. Cataplexy
- I. Narcolepsy
- J. Sleep apnoea
- K. REM Behaviour Disorder
- L. Restless Legs Syndrome
- M. Sleepwalking disorder
- N. Primary Insomnia

Which sleep 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.**

72. Gary is unable to drive due to unpredictable intermittent bouts during which he suffers a complete loss of muscle tone, causing him to collapse. **H**
73. Rangi has type II diabetes and is considerably overweight. He keeps his wife awake with his snoring and he is tired and unrefreshed during the day. **J**
74. Brendan has never slept well that he can recall. He suffers chronic dysthymia and avoids close relationships, after a childhood marred by abuse and neglect. **G**
75. Mandy, aged 3, sometimes wakes about 11pm, screaming and seeming distressed and not able to be comforted. She does not recall these episodes the next day. **A**

Extended Matching Questions

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Each question is worth 1 mark.

- A. Cushings disease
- B. Graves disease
- C. Pheochromocytoma
- D. Organophosphate toxicity
- E. Adverse reaction to steroid therapy
- F. Renal failure
- G. Liver failure
- H. Porphyria
- I. Hypothyroidism
- J. Hyperparathyroidism
- K. SIADH
- L. Psychogenic polydipsia
- M. 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.

76. A 64 y.o. man with a 45 year history of Bipolar Disorder develops lethargy, thirst, polyuria and nausea. His medication is altered but his moods are much harder to stabilise. **F**
77. A woman with schizophrenia develops polydipsia. Her serum sodium concentration is low. **L**
78. A man with schizophrenia develops headache, nausea and vomiting. His urine sodium concentration is greater than 20 mEq/L. **K**
79. A young woman dies in hospital several weeks after a serious paracetamol overdose. **G**

Extended Matching Questions

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

Each question is worth 1 mark.

1. Short term anxiety provoking psychotherapy
2. Marital therapy
3. Psychoanalysis
4. Exposure and response prevention
5. Family therapy
6. Longer-term psychodynamic psychotherapy
7. Specifically tailored group CBT
8. DBT
9. Adherence therapy
10. Expressive therapy
11. IPT
12. Individual CBT

Which therapy listed above **MOST** closely relates to each of the following examples.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

80. Good evidence base for its efficacy in patients with bulimia **G**

81. Patients need to have a clearly defined problem and excellent ego-strength **A**

82. Teaches Emotional Regulation and Distress Tolerance as core skills **H**

83. Psychodrama and Art therapy are examples **J**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Post-traumatic stress disorder
- B. Cyclothymia
- C. Normal grief
- D. Psychotic depression
- E. Intermittent explosive disorder
- F. Atypical major depression
- G. Anankastic personality disorder
- H. Cotard's syndrome
- I. Borderline personality disorder
- J. Double depression
- K. Dysphoric mania
- L. Melancholic depression
- M. Obsessive compulsive 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.

84. A stockbroker does well financially due to his chronically hypomanic state, but intermittently suffers bouts of dysthymia during which he isolates himself. **B**
85. A 32 y.o. man is admitted in a pressured and highly irritable state and ward staff feel that he has an antisocial personality disorder. A week after starting lithium he becomes settled and pleasant. **K**
86. A 41 y.o. man is pedantic and meticulous. He is excessively controlling at work where he is a factory supervisor and is rigid and stubborn. He has apparently always been this way. **G**
87. A 55 y.o. woman refuses medication, calmly stating that it is pointless as her brain has rotted. She eats and sleeps well however, and attends ward activity groups. **H**
88. A middle-aged woman is very irritable and bursts into tears at work, accusing her workmates of picking on her. She then takes sick leave and spends a lot of time in bed or eating junk food. She is usually sociable and a good worker but has not coped well since her dog was run over four months ago. **F**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Fresh commercial yoghurt
- B. 50mgs vitamin C
- C. Miso soup
- D. A daily cup of coffee
- E. Fresh cream cheese
- F. Broad beans (packaged frozen type)
- G. Daily hamburger and chips for dinner
- H. A chocolate truffle
- I. Half a can of commercial lager
- J. A glass of grapefruit juice to wash down medication
- K. Furosemide
- L. 2.5 mgs haloperidol

Which substance listed above if ingested is **MOST** likely to cause adverse effects in combination with each of the following examples.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

89. Lithium Carbonate treatment **K**

90. Tranylcypromine treatment **C**

91. Diazepam treatment **J**

92. Clozapine treatment **G**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Alcoholic dementia
- B. Multi-infarct dementia
- C. Pick's disease
- D. Huntingdon's chorea
- E. Alzheimer's disease
- F. Normal pressure hydrocephalus
- G. Chronic subdural haematoma
- H. Multiple sclerosis
- I. AIDS-related dementia
- J. Lewy-body dementia
- K. Right middle cerebral infarct
- L. Left frontal meningioma
- M. Subarachnoid haemorrhage

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.**

93. A 78 year old man is brought in by his wife with a history of confused episodes. He has tremor and some cogwheeling on examination and is irritated by "gnomes" who he says sit in a tree outside his bedroom window. **J**
94. A 55 year old man is referred by his brother who reports that he has developed urinary incontinence, memory problems and a shuffling gait. **F**
95. A 48 year old woman with a one year history of increasing nominal dysphasia develops mildly disinhibited behaviour. On testing she cannot name a pen or a watch or explain their function but her short-term memory is relatively intact. **C**
96. A 34 year old man develops cognitive impairment and depression, together with weight loss and night sweats. **I**

Extended Matching Questions

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Each question is worth 1 mark.

- A. Summation
- B. Clarification
- C. Confrontation
- D. Interpretation
- E. Paradoxing
- F. Open-ended questioning
- G. Socratic questioning
- H. Education
- I. Humour
- J. Challenging
- K. Reinforcement
- L. Close-ended questioning
- M. Empathy
- N. Reassurance
- O. Problem-solving
- P. Reframing

Which interview technique 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.**

97. "Across this time, did you have any experiences that you later realised were unusual?" **F**
98. "I wonder if instead of viewing this pending examination as an insurmountable obstacle you could try to see it as an exciting challenge?" **P**
99. "Do you think there's any possibility that this impulse to do the opposite of what your mother asks could be related to angry feelings towards her?" **D**
100. "These bouts of intense anxiety and dread that you've been having: we call them panic attacks. They're scary, but I promise that you're not having a heart attack." **H**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Paranoid schizophrenia
- B. Delusional disorder
- C. Brief psychotic episode
- D. Autism
- E. Psychotic depression
- F. Alcohol withdrawal
- G. Body dysmorphic disorder
- H. Paranoid personality disorder
- I. Benzodiazepine withdrawal
- J. Seasonal affective disorder
- K. Catatonic schizophrenia
- L. Schizophreniform disorder
- M. Schizotypal personality disorder
- N. Adjustment disorder with depressed mood
- O. Amphetamine induced psychosis
- P. Asperger's syndrome

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.**

- 101. A 23 year old man alternates between immobility and sudden violent agitation. **K**
- 102. A 30 year old physics graduate student becomes agitated and hits his father when his collection of bottle tops is disturbed while the family are moving house. **P**
- 103. A 28 year old woman suffocates her three month old baby then commits suicide using a bottle of nortriptyline tablets. **E**
- 104. A 19 year old girl is brought to hospital after stabbing herself in the abdomen. She has a four month history of beliefs that she has been invaded by aliens, and of hearing their "transmissions" emanating from her stomach. **L**

Extended Matching Questions

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

Each question is 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.**

- 105. A schoolboy is dreamy and disorganised, often forgetful and does not complete his homework. He is distractible and frequently loses toys, clothes and books. **P**
- 106. A young girl stays home from school and complains of stomach aches when her mother tries to take her. She becomes distressed when her teacher tries take her from her mother and lead her into the school. **C**
- 107. A boy raised in an orphanage in Romania appears tense and watchful. He isolates himself and is nervous if people try to talk to him. **A**
- 108. An eight-year old boy is restless and disruptive in the classroom and at home, constantly on the go and leaving mess behind him. He is doing poorly at his schoolwork and his mother is at her wits' end. **B**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Failure of empathy
- B. Restricted affective range
- C. Flat affect
- D. Labile affect
- E. Good rapport
- F. Disinhibition
- G. Ambivalence
- H. Fatuousness
- I. Humour
- J. Incongruous affect
- K. Dysphoric mood
- L. Guardedness
- M. Euphoric mood

Which concept as 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.

109. Sylvia tries to kiss the assessing registrar and wants to take off her blouse. **F**
110. Nathan stands perplexed in the doorway, putting one foot forward and then taking it back. **G**
111. Rajeev is generally sad and smiles only occasionally during the interview. **B**
112. Andrew copes with his anxiety by making jokes about “shrinks”. **I**
113. Sione laughs and jokes, then suddenly bursts into tears. Shortly afterwards he becomes angry and leaves the room abruptly. **D**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Thyroid disorder
- B. HIV
- C. Neurosyphilis
- D. Multiple sclerosis
- E. Acute Intermittent Porphyrria
- F. Normal pressure hydrocephalus
- G. Renal failure
- H. Hypoglycemia
- I. Wilson's disease
- J. Encephalitis
- K. Systemic lupus erythematosus
- L. Psychomotor epilepsy
- M. Adrenal 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.**

114. A young man presents with a manic psychosis and neurological signs several months after deciding to cease his zinc acetate medication and to take a homeopathic remedy instead. **I**
115. A young woman presents with brief outbursts during which she becomes flushed and experiences a feeling of rising warmth in her stomach. Shortly afterwards she becomes agitated, hallucinated and confused. She has no recall of the outbursts. **L**
116. A middle-aged European immigrant presents acutely to the Emergency Department with colicky abdominal pain, weakness of the legs, dysphoric mood and paranoid delusions. **E**
117. A retired maritime engineer develops a personality change and then becomes psychotic with paranoid and grandiose delusions. He also has hyper-reflexia, small irregular pupils, and a shuffling gait. **C**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. Obsessive Compulsive Disorder
- B. Creutzfeldt-Jakob Disease
- C. Rett's Syndrome
- D. Major Depressive Disorder
- E. Infantile Autism
- F. Parkinson's Disease
- G. Wernicke Korsakoff Syndrome
- H. Pick's Disease
- I. Vitamin B12 deficiency
- J. Carbon Monoxide poisoning
- K. Schizophrenia
- L. Affective psychosis
- M. Lewy body dementia
- N. Alzheimer's dementia
- O. Huntingdon's disease
- P. Binswanger's Disease

Which condition listed above is the **MOST** likely to result in each of the following examples.

Please select only **ONE** option, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

118. Patchy cell loss in the globus pallidus, hippocampus and cerebral cortex **J**
119. Atrophy of the caudate nucleus **O**
120. Spongiform neuronal degeneration of the cortex, basal ganglia, thalamus and cerebellum **B**
121. Depigmentation of the substantia nigra **F**

Extended Matching Questions

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

Each question is worth 1 mark.

- A. She stumbles over her words and has difficulty producing a fluent flow of speech. She is obviously frustrated by not being able to say what she wants.
- B. 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".
- C. She is unable to carry out a 3-step command and becomes confused when she tries to put on a cardigan - seems baffled by the sleeves.
- D. Speech is fluent but meaningless. He does not seem to understand what you say to him and cannot follow requests requiring non-verbal responses.
- E. He cannot tell you the name of his ring and index fingers and cannot do basic arithmetic.
- F. There are deficits in his anterograde memory, and he confabulates freely in a cheerful manner about recent events.
- G. She is fully orientated 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.
- H. She cannot copy the repeating ooo+++ pattern - just produces a line of oooooooooos. Her speech is full of perseverations and she is vague and confused.
- I. There are some deficits in anterograde and retrograde memory on examination but her social skills are preserved.
- J. Unable to repeat "no ifs ands or buts" - he tries hard but produces many paraphasias. Spontaneous speech is however normal.

Which finding on cognitive testing listed above is the MOST likely to occur in the following diagnoses.

Please select only ONE option, BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.

122. Chronic schizophrenia B

123. Korsakoff's syndrome F

124. Early Alzheimer's dementia I

Extended Matching Questions

Questions 125 to 132

**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 questions in this booklet. Use the separate answer sheet and pencil provided.

Each question is worth 2 marks. One mark for each correct answer.

- A. Full blood count
- B. Urea and electrolytes
- C. Electrocardiogram
- D. Chest X-Ray
- E. HB21C
- F. Free thyroxine index and TSH
- G. Temperature
- H. Weight
- I. Fasting serum glucose
- J. Serum creatinine
- K. Lateral neck X-Ray
- L. AIMS or GATES assessment
- M. Girth (waist) measurement
- N. Serum creatinine kinase

For each of the following examples, select the TWO most appropriate investigations from the list above.

Please select TWO options for each question, BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.

125. A 52 y.o. woman with longstanding bipolar disorder, treated with lithium, develops difficulty swallowing. **F K**

126. A 33 y.o. man treated with risperidone develops muscle rigidity, hypertension and a tachycardia. **G N**

Extended Matching Questions:

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

Each question is worth 2 marks. One mark for each correct answer.

- A. SSRI antidepressant
- B. Cognitive behavioural therapy
- C. Clomipramine
- D. Psychodynamic psychotherapy
- E. Oral risperidone
- F. Group CBT with peers
- G. Clozapine
- H. Tranylcypromine
- I. Group therapy with peers
- J. Venlafaxine
- K. Exposure and response prevention
- L. Family therapy
- M. Risperidone Consta

For each of the following examples, select the **TWO** most appropriate treatment options from the list above, to be used concurrently.

Please select **TWO** options for each question, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

127. Rosalie works as a kindergarten teacher and is aged 27. She shares an apartment with friends and has been referred with bulimia nervosa and depressive symptoms. **A F**

128. Andrew is a 39 y.o. married accountant with obsessive compulsive disorder. He has not responded to high-dose SSRI or SNRI therapy. **C K**

Extended Matching Questions:

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

Each question is worth 2 marks. One mark for each correct answer.

- A. Motivational interviewing
- B. Arrange a neurological consultation
- C. Genetic counselling
- D. Family psychoeducation
- E. Supportive psychotherapy
- F. Electroencephalogram
- G. Visual testing
- H. ADL assessment by an Occupational Therapist
- I. Amniocentesis
- J. Driving assessment by an Occupational Therapist
- K. Adherence therapy
- L. Neuroimaging
- M. Genetic testing

For each of the following examples, select the **TWO** most appropriate next interventions from the list above.

Please select **TWO** options for each question, **BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.**

129. After a 61 year old man is newly diagnosed with Huntingdon's disease, his 40 year old daughter asks what her chances are of developing the condition. **B C**

130. Marvin, a 25 y.o. man with a schizoaffective disorder, has been hospitalised in a rehabilitation unit and is now wanting to get his own rental accommodation. He sometimes forgets medication doses. **H K**

Extended Matching Questions:

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

Each question is worth 2 marks. One mark for each correct answer.

- A. Schizophrenia, paranoid type
- B. Manic episode with mood-congruent psychotic features
- C. Delusional disorder, somatic type
- D. Schizophrenia, catatonic type
- E. Schizoaffective disorder
- F. Brief psychotic disorder
- G. Substance-induced psychotic disorder
- H. Delusional disorder, persecutory type
- I. Psychosis due to a General Medical Condition
- J. Schizophreniform disorder
- K. Shared psychotic disorder
- L. Schizophrenia, residual type
- M. Major depression with mood-congruent psychotic features

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

Please select TWO options for each question, BUT ANY OPTION MAY BE USED MORE THAN ONCE, IF REQUIRED.

131. Abdul, aged 27, is a devout Muslim. He is convinced that secret policemen are watching and following him, despite there being no evidence of this. He says that he can hear them talking about him sometimes when he lifts up the telephone receiver. These problems have been building up across the past year. **A H**
132. Rhonda, aged 32, has a 20 year history of grand mal seizures, generally quite well controlled on medication. Across the past eight months she has become very religious and convinced that "the Holy Ghost" is literally inside her. She says that she can see an aura around herself that proves this. She often hears the voices of "angels and demons", discussing her actions, and believes that the demons plan to try to kill her via a car accident. She sleeps and eats well, however. **A I**



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

CRITICAL ANALYSIS PROBLEMS

MOCK EXAMINATION

Paper I

Revised May 2010

DIRECTIONS

Do not answer questions in this booklet.

Use the separate answer sheet and pencil provided.

Questions 1 – 14:

SELECT ONLY AS MANY ANSWERS AS INSTRUCTED

(one mark for each correct answer)

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

Critical Analysis Question 1 (20 marks)

Read the abstract and answer the questions that follow.

Age at onset and cognition in schizophrenia: meta-analysis

T. K. Rajji, MD, FRCPC, Z. Ismail, MD, FRCPC and B. H. Mulsant, MD, MS, FRCPC

Department of Psychiatry, University of Toronto and Geriatric Mental Health Program, Centre for Addiction and Mental Health, Toronto, Canada

The British Journal of Psychiatry (2009) 195: 286-293. doi: 10.1192/bjp.bp.108.060723

Background

The relationship between cognition and age at onset of schizophrenia is largely unknown.

Aims

To compare cognitive deficits in individuals with youth-onset and late-onset schizophrenia with those in adults with first-episode schizophrenia.

Method

Twenty-nine databases (including EMBASE, MEDLINE and PsycINFO) were searched from 1980 to 2008. Selected publications had to include healthy controls and analyse separately individuals diagnosed with schizophrenia or a related disorder and individuals with first-episode, youth-onset (maximum age of onset of 19 years) or late-onset schizophrenia (minimum age of onset of 40 years).

Results

Individuals with youth-onset and first-episode schizophrenia demonstrate large deficits (mean effect size ≥ 0.8) on almost all cognitive measures. Individuals with youth-onset schizophrenia demonstrate larger deficits than those with first-episode schizophrenia on arithmetic, executive function, IQ, psychomotor speed of processing and verbal memory. In contrast, those with late-onset schizophrenia demonstrate minimal deficits on arithmetic, digit symbol coding and vocabulary, but larger ones on attention, fluency, global cognition, IQ and visuospatial construction.

Conclusions

Individuals with youth-onset schizophrenia have severe cognitive deficits, whereas those with late-onset schizophrenia have some relatively preserved cognitive functions. This finding supports the view that severity of the disease process is associated with different ages at onset. In addition, the cognitive pattern of people with late-onset schizophrenia suggests that their deficits are specific rather than solely as a result of ageing and related factors.

Question 1

Select **THREE** options that best apply to the publications analysed in this study: (3 marks)

(Please select **ONLY** three options: more than three answers will incur a mark of zero)

A.	Experimental
B.	Prospective
C.	Case controlled
D.	Randomised controlled trials
E.	Interventionist
F.	Observational
G.	Case Studies
H.	Prognostic

(Correct: C, F, H)

Question 2

Select **THREE** correct statements about Meta-Analysis from the list below: (3 marks)

(Please select **ONLY** three options: more than three answers will incur a mark of zero)

A.	A meta-analysis is synonymous with a statistical review
B.	Meta-analysis is a statistical technique which involves the combination of effect sizes
C.	Meta-analysis results are always presented in the form of “forest plots”
D.	Meta-analysis is a technique to calculate the median and range of the results of different studies
E.	Meta-analysis can only be performed with experimental (intervention) studies
F.	Meta-analysis is a statistical technique which compares the results of different studies
G.	Meta-analysis is a statistical technique involving some type of meta-regression
H.	Richard Forest published the first meta-analysis in 1940

(Correct: B, F, G)

Question 3

Select **THREE** correct statements about Effect-Size from the list below: (3 marks)

(Please select **ONLY** three options: more than three answers will incur a mark of zero)

A.	The effect-size result is dependent on the variability of the data
B.	The effect-size in the study above by Rajii et al is <i>medium</i> , according to Cohen
C.	An effect size of ≥ 0.5 is <i>large</i> , according to Cohen
D.	Effect-size is a term which is only used for the treatment effect of an intervention
E.	The effect-size in the study above by Rajii et al is <i>large</i> , according to Cohen
F.	Pearson’s “r” correlation is not a measure of effect-size
G.	Interpretation of effect-size depends on the context and nature of the study
H.	Effect-size is not useful in Power calculations

(Correct: A, E, G)

Question 4

Select the **THREE** least likely sources of error arising from defining age of onset of schizophrenia as age of first presentation to mental health services, in the study above: (3 marks)

(Please select **ONLY** three options: more than three answers will incur a mark of zero)

A.	Varying structure of different mental health services
B.	Lack of Early Intervention teams in some services
C.	Lack of adequate training in mental health staff making the initial diagnosis
D.	Stigma causing prolonged duration of untreated psychosis before first presentation
E.	Individuals developing symptoms lacking access to primary care physicians
F.	Inadequate health system resources with poor documentation of diagnosis
G.	Lack of insight causing prolonged duration of untreated psychosis before first presentation

(Correct: C, E, F)

Question 5

“Individuals with youth-onset schizophrenia have severe cognitive deficits, whereas those with late-onset schizophrenia have some relatively preserved cognitive functions.”

Select the **THREE** options most directly linked to the aetiology of the illness, which might give rise to this finding in the study above: (3 marks)

(Please select **ONLY** three options: more than three answers will incur a mark of zero)

A.	Those with youth-onset schizophrenia have increased acute relapses and admissions across their longer course, resulting in more cognitive deficits
B.	Individuals with younger age of onset have a more severe form of schizophrenia, hence more cognitive deficits
C.	Younger age of onset is associated with a more marked phenotypic expression of schizophrenia
D.	Individuals with younger age of onset have higher rates of concurrent substance abuse, worsening cognitive deficits
E.	Younger age of onset of the illness results in poorer educational opportunities and educational achievement, causing reduced cognitive abilities
F.	Cognitive deficits arise from prolonged antipsychotic medication use and worsen with longer course of the illness
G.	Individuals with younger age of onset have a more strongly genetically driven form of the illness

(Correct: B, C, G)

Question 6

The study results noted varying patterns in the cognitive deficits occurring in individuals with youth-onset or late-onset schizophrenia.

Select the THREE options below most directly linked to frontal lobe deficits: (3 marks)

(Please select ONLY three options: more than three answers will incur a mark of zero)

A.	Poor verbal fluency
B.	Deficits in temporal orientation
C.	Vocabulary deficits
D.	Attentional deficits
E.	Deficits in arithmetic
F.	Visuo-spatial construction deficits
G.	Dressing dyspraxia

(Correct: A, D, F)

Question 7

Select the TWO options that best apply, regarding the databases mentioned in this study: (2 marks)

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

A.	Medline contains over 20 million records from approximately 7000 publications
B.	Medline contains only records relating to medicine and biological research in human subjects
C.	Embase has a poorer coverage of non-English journals than Medline
D.	PsycINFO is produced by NIMH (National Institutes of Mental Health)
E.	Embase has a greater bias than Medline towards pharmacological research
F.	PsycINFO contains references from texts and manuscripts, as well as journal articles
G.	Medline has a greater bias than Embase towards pharmacological research

(Correct: E, F)

Critical Analysis Question 2 (20 marks)

Read the abstract and answer the questions that follow.

Structured risk assessment and violence in acute psychiatric wards: randomised controlled trial

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The British Journal of Psychiatry (2008) 193: 44-50. doi: 10.1192/bjp.bp.107.045534

Background

There is a lack of research on the possible contribution of a structured risk assessment to the reduction of aggression in psychiatric in-patient care.

Aims

To assess whether such risk assessments decrease the incidence of violence and coercion.

Method

A cluster randomised controlled trial was conducted with 9 acute psychiatric admission wards as the units of randomisation, (with four wards in the intervention arm and five wards in the control arm). The intervention comprised a standardised risk assessment following admission with mandatory evaluation of prevention in high-risk patients.

Results

Incidence rates decreased substantially in the intervention wards, whereas little change occurred in the control wards. The adjusted risk ratios suggest a 45% reduction in severe aggressive incidents and a 27% decline in the use of coercive measures. The severity of aggressive incidents did not decrease.

Conclusions

Structured risk assessment during the first days of treatment may contribute to reduced violence and coercion in acute psychiatric wards.

Question 8

Select the **SIX** most accurate statements about cluster randomised controlled trials, from the list below: (6 marks)

(Please select **ONLY** six options: more than six answers will incur a mark of zero)

A.	They are randomised controlled trials with individuals, in which “cluster analysis” is used on the data
B.	The main problem which cluster randomised controlled trials exacerbate (compared to standard randomised controlled trials) is the problem of “contamination” within the group being researched (e.g. peer influence on behaviours)
C.	Cluster randomised trials can inflate Type I errors (compared to standard randomised controlled trials)
D.	Groups of subjects, as opposed to individual subjects, are randomised in the trial
E.	They are randomised controlled trials with individuals, where the data is analysed in clusters and presented as a “cluster graph”
F.	Cluster randomised trials can inflate “false positive” errors (compared to standard randomised controlled trials)
G.	Statistical analysis of cluster randomised controlled trials occurs at the cluster level, and cannot include patient level analysis of data
H.	Cluster randomised trials involve greater complexity in the design and analysis (compared to standard randomised control trials)
I.	Cluster randomised trials can inflate “false negative” errors (compared to standard randomised controlled trials)
J.	A cluster randomised trial requires fewer subjects to achieve the same statistical Power than does an individually randomised control trial
K.	Place-randomised trials is another term for cluster randomised trials
L.	Cluster randomised trials can inflate Type II errors (compared to standard randomised controlled trials)
M.	They allow researchers to study interventions that cannot be directed at individual subjects
N.	Ethical considerations in cluster randomised controlled trials are less contentious than in standard randomised controlled trials

(Correct: **C, D, F, H, K, M**)

Question 9

Select the **THREE** most important ethical issues that particularly occur with the cluster randomised controlled trial study above: (3 marks)

(Please select **ONLY** three options: more than three answers will incur a mark of zero)

A.	Whether the wider benefits to the area's mental health system outweighed the compromising of autonomy of individuals within the clusters
B.	The risk of harm from the intervention affecting everyone within a cluster as opposed to an individual (as in a standard randomised controlled trial)
C.	The adequacy of the consent process with "cluster guardians" – the mental health leaders who agreed to inpatients and staff of their local ward being enrolled in the trial
D.	Patient consent – as it was not possible to obtain individual consent from the members of a cluster regarding which ward they were admitted to and thus whether they were part of an intervention or a control cluster
E.	That there were 5 control group clusters who did not receive a potentially helpful intervention, as opposed to 4 intervention clusters
F.	Inaccurate statistical analysis producing erroneous results, leading to inappropriate policy changes that might affect all subsequent people admitted to these wards
G.	Patients in the "control" wards not being informed that the study was being conducted

(Correct: A, C, D)

Table 1 Main outcome measures

	Intervention			Control		
	Patients, <i>n</i> (treatment days)	Incidents	Rate/100 treatment days (95% CI)	Patients, <i>n</i> (treatment days)	Incidents	Rate/100 treatment days (95% CI)
Before intervention	364 (6074)	81	1.33 (1.06-1.66)	515 (8449)	95	1.12 (0.91-1.37)
After intervention	390 (7727)	56	0.73 (0.59-1.00)	583 (10 485)	100	0.95 (0.78-1.16)
Change			-45%			-15%

Question 10

In Table 1 above, what is the *absolute risk reduction* for the change in incidents per 100 days for the intervention? (1 mark)

(Please select ONLY one option: more than one answer will incur a mark of zero)

A.	0.17 incidents per 100 treatment days
B.	0.45 incidents per 100 treatment days
C.	0.73 incidents per 100 treatment days
D.	0.95 incidents per 100 treatment days
E.	0.60 incidents per 100 treatment days

(Correct: E)

Question 11

In Table 1 above, what is the *relative risk reduction* for the change in incidents per 100 days for the intervention? (1 mark)

(Please select ONLY one option: more than one answer will incur a mark of zero)

A.	15%
B.	45%
C.	30%
D.	60%
E.	56%

(Correct: B)

Question 12

In Table 1 above, what is the *relative risk reduction* for the change in incidents per 100 days for the intervention, *compared to the controls*? (1 mark)

(Please select ONLY one option: more than one answer will incur a mark of zero)

A.	1.5
B.	4.5
C.	3.0
D.	6.0
E.	5.6

(Correct: C)

Question 13

Select, from the list below, the **FOUR** most likely confounding factors that might account for the change in the number of incidents in the study. (4 marks)

(Please select **ONLY** four options: more than four answers will incur a mark of zero)

A.	Changes in the composition of the staff in the intervention wards
B.	A new consultant commencing in one of the intervention wards
C.	Rotation change, with new registrars commencing work in all of the wards
D.	A change to the diagnostic mix of the patients in the intervention wards
E.	Conflicts with management affecting the morale of staff in the intervention wards
F.	The commencement of a rigid no-smoking policy, applied to the patients and staff on some of the wards
G.	All of the wards changing over from paper-based to electronic records
H.	A consultant psychiatrist on one of the intervention wards going on annual leave

(Correct: A, D, E, F)

Question 14

Confidence Intervals are given in Table 1.

Select the **FOUR** most accurate statements about Confidence Intervals, from the list below. (4 marks)

(Please select **ONLY** four options: more than four answers will incur a mark of zero)

A.	Confidence Intervals are “point estimates” of data
B.	A wide Confidence Interval means that we are sure about the value of the unknown parameter
C.	The probability of a 95% Confidence Interval containing the true value is either 1 or 0
D.	If the procedure for computing a 95% Confidence Interval is used over and over, 95% of the time the Interval will contain the true parameter value
E.	A 95% Confidence Interval has a 95% chance of containing the true parameter value
F.	Confidence Intervals are an expression of probability
G.	The Confidence Interval is a range of values, within which we are fairly sure the true value of the parameter being investigated lies
H.	If the confidence interval overlaps zero, the effect is said to be statistically significant

(Correct: C, D, F, G)