

Paper 2

	True	False
1. Tubocurarine is a nicotinic receptor antagonist.	<input type="checkbox"/>	<input type="checkbox"/>
2. In a dose-response curve ED ₅₀ represents the dose which elicits 50% of the maximal response and E _{max} represents the dose which elicits maximum response.	<input type="checkbox"/>	<input type="checkbox"/>
3. IC ₅₀ represents the concentration of antagonist needed to displace the ligand from 50% of the available receptors.	<input type="checkbox"/>	<input type="checkbox"/>
4. Co-administration of tryptophan and an MAOI should be avoided.	<input type="checkbox"/>	<input type="checkbox"/>
5. Mianserin causes the blockade of alpha 2 adrenoceptors and 5-HT ₂ receptors.	<input type="checkbox"/>	<input type="checkbox"/>
6. d-serine is an NMDA receptor antagonist.	<input type="checkbox"/>	<input type="checkbox"/>
7. d-cycloserine is a partial agonist at the NMDA receptor glycine site.	<input type="checkbox"/>	<input type="checkbox"/>
8. In some trials, sigma receptor antagonists have shown an antipsychotic effect.	<input type="checkbox"/>	<input type="checkbox"/>
9. GABA-A receptor agonists might be of some use as adjuvants in the treatment of schizophrenia.	<input type="checkbox"/>	<input type="checkbox"/>
10. Omega-3 fatty acids are shown to be increased in the neuronal membranes of schizophrenic patients.	<input type="checkbox"/>	<input type="checkbox"/>
11. Antidepressant drugs are not associated with tolerance and craving.	<input type="checkbox"/>	<input type="checkbox"/>
12. Iloperidone is a new antipsychotic with very high affinity for alpha-2 adrenoceptors.	<input type="checkbox"/>	<input type="checkbox"/>
13. Methylphenidate is a controlled class B drug in the UK used in the treatment of attention deficit hyperactivity disorder.	<input type="checkbox"/>	<input type="checkbox"/>
14. More than 90% of unchanged aripiprazole is renally excreted.	<input type="checkbox"/>	<input type="checkbox"/>
15. In the treatment of drug addiction, diamorphine can be prescribed in the UK without a special licence.	<input type="checkbox"/>	<input type="checkbox"/>
16. Coproxamol overdose presents with pinpoint pupils and respiratory depression.	<input type="checkbox"/>	<input type="checkbox"/>
17. Neostigmine reverses the action of the depolarising muscle relaxant suxamethonium.	<input type="checkbox"/>	<input type="checkbox"/>
18. Anticholinesterases such as neostigmine reverse the effects of the non- depolarised muscle relaxant drugs.	<input type="checkbox"/>	<input type="checkbox"/>
19. Naloxone reverses opioid-induced respiratory depression.	<input type="checkbox"/>	<input type="checkbox"/>
20. Dantrolene worsens the symptoms of malignant hyperthermia.	<input type="checkbox"/>	<input type="checkbox"/>
21. Active metabolites are rarely produced by phase 2 metabolism involving sulphation, acetylation or conjugation with glucuronic acid.	<input type="checkbox"/>	<input type="checkbox"/>
22. Grapefruit juice induces CYP3A4 activity in the gut mucosa.	<input type="checkbox"/>	<input type="checkbox"/>
23. The excretion of amphetamine is increased if the urine is strongly acid.	<input type="checkbox"/>	<input type="checkbox"/>
24. Hydroxyrisperidone is an inactive metabolite.	<input type="checkbox"/>	<input type="checkbox"/>

	True	False
25. Plasma concentration of clozapine rises significantly when fluvoxamine is added.	<input type="checkbox"/>	<input type="checkbox"/>
26. The blood test for serum lithium level measurement should preferably be done 24 hours after the previous dose.	<input type="checkbox"/>	<input type="checkbox"/>
27. Low plasma albumin leads to lithium toxicity.	<input type="checkbox"/>	<input type="checkbox"/>
28. Increased progesterone secretion during pregnancy suppresses hepatic metabolism of drugs.	<input type="checkbox"/>	<input type="checkbox"/>
29. DOPA decarboxylase converts dopamine to noradrenalin.	<input type="checkbox"/>	<input type="checkbox"/>
30. D1 and D5 receptors stimulate adenylate cyclase to form cyclic – AMP as a second messenger.	<input type="checkbox"/>	<input type="checkbox"/>
31. 5HT2C antagonists cause weight loss.	<input type="checkbox"/>	<input type="checkbox"/>
32. 5HT2A antagonists reduce hallucinations caused by psychotomimetic drugs.	<input type="checkbox"/>	<input type="checkbox"/>
33. Hallucinations may be caused by H2 antagonists (e.g. ranitidine and cimetidone).	<input type="checkbox"/>	<input type="checkbox"/>
34. Labelled ligands such a raclopride and epidepride are used to measure the receptor occupancy of the antipsychotic.	<input type="checkbox"/>	<input type="checkbox"/>
35. Clozapine has a low ratio of receptor-binding affinities to 5-HT2A and D2 sites.	<input type="checkbox"/>	<input type="checkbox"/>
36. Nausea and insomnia are the features of cholinergic rebound following the abrupt discontinuation of anticholinergic drugs.	<input type="checkbox"/>	<input type="checkbox"/>
37. Higher doses of procyclidine cause hallucinations, euphoria and dilated pupils.	<input type="checkbox"/>	<input type="checkbox"/>
38. Orphenadrine has more stimulant effects than procyclidine or benzhexol.	<input type="checkbox"/>	<input type="checkbox"/>
39. Hyoscine is useful in the treatment of clozapine-induced hypersalivation.	<input type="checkbox"/>	<input type="checkbox"/>
40. Acamprosate is used in the treatment of alcohol detoxification.	<input type="checkbox"/>	<input type="checkbox"/>
41. Lofexidine causes more hypotension than clonidine.	<input type="checkbox"/>	<input type="checkbox"/>
42. Lofexidine is alpha2 adrenergic agonist used in the treatment of acute opiate withdrawal syndrome.	<input type="checkbox"/>	<input type="checkbox"/>
43. Buprenorphine has both opioid agonist and antagonist actions.	<input type="checkbox"/>	<input type="checkbox"/>
44. Hormone replacement therapy in women has been reported to be associated with an increased risk of developing Alzheimer's disease.	<input type="checkbox"/>	<input type="checkbox"/>
45. Aspirin and dipyridamole are beneficial in the treatment of vascular dementia.	<input type="checkbox"/>	<input type="checkbox"/>
46. Galantamine was originally extracted from daffodils.	<input type="checkbox"/>	<input type="checkbox"/>
47. Traces of lithium are absent normally in the human body.	<input type="checkbox"/>	<input type="checkbox"/>
48. A low-sodium diet increases serum lithium levels.	<input type="checkbox"/>	<input type="checkbox"/>
49. PET studies have shown that the D2 receptor occupancy by clozapine is much higher than by conventional anti psychotics.	<input type="checkbox"/>	<input type="checkbox"/>
50. Study of how the body handles a drug is pharmacokinetics.	<input type="checkbox"/>	<input type="checkbox"/>

Paper 2

1. Tubocurarine is a nicotinic receptor antagonist.
Ans. True.
2. In a dose-response curve ED50 represents the dose which elicits 50% of the maximal response and Emax represents the dose which elicits maximum response.
Ans. True.
3. IC50 represents the concentration of antagonist needed to displace the ligand from 50% of the available receptors.
Ans. True.
4. Co-administration of tryptophan and an MAOI should be avoided.
Ans. False. Co-administration of tryptophan and an MAOI is useful in the treatment of resistant depression.
5. Mianserin causes the blockade of alpha 2 adrenoceptors and 5-HT2 receptors.
Ans. True.
6. d-serine is an NMDA receptor antagonist.
Ans. False. d-serine is an NMDA receptor agonist.
7. d-cycloserine is a partial agonist at the NMDA receptor glycine site.
Ans. True.
8. In some trials, sigma receptor antagonists have shown an antipsychotic effect.
Ans. True. For example, panamesine
9. GABA-A receptor agonists might be of some use as adjuvants in the treatment of schizophrenia.
Ans. True. GABA-A receptors are inhibitory and GABA-B receptors are stimulatory on the dopamine receptors.
10. Omega-3 fatty acids are shown to be increased in the neuronal membranes of schizophrenic patients.
Ans. False. They are deficient. This is the basis of the phospholipid and membrane hypothesis.
11. Antidepressant drugs are not associated with tolerance and craving.
Ans. True.
12. Iloperidone is a new antipsychotic with very high affinity for alpha-2 adrenoceptors.
Ans. True.
13. Methylphenidate is a controlled class B drug in the UK used in the treatment of attention deficit hyperactivity disorder.
Ans. True.
14. More than 90% of unchanged aripiprazole is renally excreted.
Ans. False. Less than 1%.
15. In the treatment of drug addiction, diamorphine can be prescribed in the UK without a special licence.
Ans. False: A special licence issued by the Home Secretary is required to prescribe diamorphine (heroin), dipipanone and cocaine.
16. Coproxamol overdose presents with pinpoint pupils and respiratory depression.
Ans. True.
17. Neostigmine reverses the action of the depolarising muscle relaxant suxamethonium.
Ans. False. It prolongs the action of suxamethonium.

18. Anticholinesterases such as neostigmine reverse the effects of the non- depolarised muscle relaxant drugs.
Ans. True.
19. Naloxone reverses opioid-induced respiratory depression.
Ans. True.
20. Dantrolene worsens the symptoms of malignant hyperthermia.
Ans. False. It is used in the treatment of malignant hyperthermia.
21. Active metabolites are rarely produced by phase 2 metabolism involving sulphation, acetylation or conjugation with glucuronic acid.
Ans. True.
22. Grapefruit juice induces CYP3A4 activity in the gut mucosa.
Ans. False. It inhibits it.
23. The excretion of amphetamine is increased if the urine is strongly acid.
Ans. True. Amphetamine is a weak base.
24. Hydroxyrisperidone is an inactive metabolite.
Ans. False. It is an active metabolite.
25. Plasma concentration of clozapine rises significantly when fluvoxamine is added.
Ans. True. Fluvoxamine inhibits CYP1A2.
26. The blood test for serum lithium level measurement should preferably be done 24 hours after the previous dose.
Ans. False. It should be done after 12 hours.
27. Low plasma albumin leads to lithium toxicity.
Ans. False. Lithium is not protein bound.
28. Increased progesterone secretion during pregnancy suppresses hepatic metabolism of drugs.
Ans. True.
29. DOPA decarboxylase converts dopamine to noradrenalin.
Ans. False. It is converted by dopamine- β -hydroxylase.
30. D1 and D5 receptors stimulate adenylate cyclase to form cyclic – AMP as a second messenger.
Ans. True.
31. 5HT_{2C} antagonists cause weight loss.
Ans. False. They cause weight gain.
32. 5HT_{2A} antagonists reduce hallucinations caused by psychotomimetic drugs.
Ans. True.
33. Hallucinations may be caused by H₂ antagonists (e.g. ranitidine and cimetidone).
Ans. True.
34. Labelled ligands such a raclopride and epidepride are used to measure the receptor occupancy of the antipsychotic.
Ans. True.
35. Clozapine has a low ratio of receptor-binding affinities to 5-HT_{2A} and D₂ sites.
Ans. False. It has a high ratio.
36. Nausea and insomnia are the features of cholinergic rebound following the abrupt discontinuation of anticholinergic drugs.
Ans. True.

37. Higher doses of procyclidine cause hallucinations, euphoria and dilated pupils.
Ans. True.
38. Orphenadrine has more stimulant effects than procyclidine or benzhexol.
Ans. False. It is less of a stimulant.
39. Hyoscine is useful in the treatment of clozapine-induced hypersalivation.
Ans. True.
40. Acamprosate is used in the treatment of alcohol detoxification.
Ans. False. It is used as an anti-craving drug for the maintenance of abstinence from alcohol.
41. Lofexidine causes more hypotension than clonidine.
Ans. False: It causes less hypotension than clonidine
42. Lofexidine is alpha2 adrenergic agonist used in the treatment of acute opiate withdrawal syndrome.
Ans. True.
43. Buprenorphine has both opioid agonist and antagonist actions.
Ans. True.
44. Hormone replacement therapy in women has been reported to be associated with an increased risk of developing Alzheimer's disease.
Ans. False. It is associated with a reduced risk.
45. Aspirin and dipyridamole are beneficial in the treatment of vascular dementia.
Ans. True.
46. Galantamine was originally extracted from daffodils.
Ans. True.
47. Traces of lithium are absent normally in the human body.
Ans. False.
48. A low-sodium diet increases serum lithium levels.
Ans. True.
49. PET studies have shown that the D2 receptor occupancy by clozapine is much higher than by conventional anti psychotics.
Ans. False. D2 receptor occupancy by clozapine is 42-60% of that of conventional anti-psychotics.
50. Study of how the body handles a drug is pharmacokinetics.
Ans. True.

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