

**FACEM PART I
PRACTICE MCQ EXAM
PHARMACOLOGY**

60 questions allow 90 minutes

1. An example of an ADH antagonist is
 - a) ethanol
 - b) amiloride
 - c) lithium
 - d) aldosterone
 - e) triamterene

2. Carbonic anhydrase inhibitors
 - a) were developed from early antibiotics
 - b) are closely related to thiazide diuretics
 - c) cause metabolic acidosis
 - d) decrease the pH of the cerebrospinal fluid
 - e) all of the above

3. The calcium channel blocker with the most rapid onset of action when given orally is
 - a) diltiazem
 - b) nifedipine
 - c) verapamil
 - d) felodipine
 - e) nicardipine

4. Sodium nitroprusside
 - a) increases cGMP by release of nitric oxide
 - b) decreases vascular resistance but increases blood pressure
 - c) is a complex of calcium and cyanide groups
 - d) is predominantly an arteriodilator
 - e) has its onset in 10-15 minutes

5. The most lipid soluble beta-blocker is
 - a) propranolol
 - b) metoprolol
 - c) atenolol
 - d) pindolol
 - e) sotalol

6. The cholinesterase inhibitor with the shortest duration of action is
 - a) physostigmine
 - b) edrophonium
 - c) neostigmine
 - d) parathion
 - e) malathion

7. The volume of distribution
 - a) is calculated by dividing amount of drug by its clearance
 - b) if high suggests homogeneous distribution through tissues
 - c) if low suggests homogeneous distribution through tissues
 - d) of aspirin is greater than that of pethidine
 - e) of midazolam is greater than that of warfarin

8. The half life of lignocaine is
- 1 minute
 - 5 minutes
 - 10 minutes
 - 30 minutes
 - 120 minutes
9. Which of the following is a direct serotonin agonist
- fluoxetine
 - amitriptyline
 - moclobemide
 - ondansetron
 - sumatriptan
10. The opiate associated with seizures when given in high doses to patients with renal failure is
- morphine
 - pethidine
 - methadone
 - fentanyl
 - codeine
11. Ketamine is closely chemically related to
- phenylcyclidine
 - LSD
 - propofol
 - thiopentone
 - enflurane
12. All of the following are amide local anaesthetics EXCEPT
- lignocaine
 - bupivacaine
 - benzocaine
 - prilocaine
 - etidocaine
13. The local anaesthetic associated with methaemoglobinaemia is
- cocaine
 - prilocaine
 - procaine
 - bupivacaine
 - benzocaine
14. The muscle relaxant most commonly associated with tachycardia is low dose
- succinylcholine
 - atracurium
 - vecuronium
 - pancuronium
 - tubocurarine

15. The most potent mineralocorticoid is
- hydrocortisone
 - prednisolone
 - methylprednisolone
 - dexamethasone
 - betamethasone
16. All of the following inhibit nucleic acid synthesis EXCEPT
- norfloxacin
 - trimethoprim
 - rifampicin
 - sulfasalazine
 - chloramphenicol
17. Which of the following is a second generation cephalosporin
- cefaclor
 - ceftazidime
 - cephalexin
 - cefotaxime
 - cephalothin
18. Which of the following is a live virus vaccine
- typhoid
 - tetanus
 - hepatitis B
 - rabies
 - measles
19. All of the following may increase the effect of digoxin EXCEPT
- amiodarone
 - furosemide
 - carbamazepine
 - verapamil
 - quinidine
20. Streptokinase
- is a complex lipopolysaccharide
 - is synthesised by the human kidney
 - binds to the proactivator plasminogen
 - activates plasminogen that is bound to fibrin
 - is more dangerous than t-PA in the over 75's
21. The effects of methylxanthines include:
- weak antidiuresis
 - increased strength of skeletal muscle contraction
 - negative inotropic effects
 - medullary depression
 - stimulation of cell surface adenosine receptors

22. Regarding neurotransmitter pharmacology in the CNS:
- a) strychnine stimulates glycine receptors
 - b) atropine antagonises GABA receptors
 - c) butyrophenones stimulate dopamine receptors
 - d) ondansetron antagonises serotonin receptors
 - e) atenolol stimulates noradrenaline receptors
23. Buspirone relieves anxiety without sedation by:
- a) direct GABA ergic stimulation
 - b) indirect GABA ergic stimulation
 - c) direct noradrenaline receptor stimulation
 - d) indirect noradrenaline receptor stimulation
 - e) none of the above
24. The most potent sedative is:
- a) diazepam
 - b) midazolam
 - c) temazepam
 - d) phenobarbitone
 - e) chloral hydrate
25. Methanol intoxication:
- a) is partly due to inhibition of aldehyde dehydrogenase
 - b) is due to formation of oxalic acid
 - c) is treated in part with activated charcoal
 - d) produces renal damage due to crystal formation
 - e) can be treated with 4 methylpyrazole
26. Carbamazepine is closely related to:
- a) vigabatrin
 - b) quinidine
 - c) sodium valproate
 - d) metoprolol
 - e) imipramine

27. The MAC (minimum alveolar concentration) is greatest for:
- a) nitrous oxide
 - b) halothane
 - c) isoflurane
 - d) methoxyflurane
 - e) ketamine
28. All of the following are anaesthetic agents EXCEPT:
- a) midazolam
 - b) glycopyrolate
 - c) propofol
 - d) fentanyl
 - e) etomidate
29. The muscle relaxant with the longest duration of action is:
- a) atracurium
 - b) mivacurium
 - c) pancuronium
 - d) vecuronium
 - e) rocuronium
30. A patient complains of muscle pain post operatively. This is most likely to be due to:
- a) propofol
 - b) isoflurane
 - c) suxamethonium
 - d) atracurium
 - e) ketamine
31. Amantadine:
- a) is an antiviral drug
 - b) produces insomnia not sedation
 - c) causes acute psychosis
 - d) potentiates dopaminergic function

- e) all of the above
32. The drug used as an antipsychotic most likely to cause extrapyramidal effects is:
- a) chlorpromazine
 - b) lorazepam
 - c) risperidone
 - d) haloperidol
 - e) clozapine
33. The drug that acts by MAO inhibition is:
- a) clomipramine
 - b) sertraline
 - c) trazodone
 - d) moclobemide
 - e) paroxetine
34. The most dangerous drug in overdose is:
- a) imipramine
 - b) moclobemide
 - c) sertraline
 - d) trazodone
 - e) paroxetine
35. A high degree of tolerance can be expected to all of these effects of morphine in long term use EXCEPT:
- a) miosis
 - b) nausea
 - c) cough suppression
 - d) analgesia
 - e) respiratory depression
36. Methadone is used in the treatment of narcotic addiction because:
- a) it is a less efficacious analgesic than morphine
 - b) it produces predictable effects when given orally
 - c) it produces a short withdrawal when ceased
 - d) it is a phenylpiperidine class narcotic agonist

- e) it does not produce constipation
37. Cannabinoids:
- a) produce tachycardias
 - b) have an antipsychotic action
 - c) act at a number of non specific receptors
 - d) constrict the pupils
 - e) all of the above
38. Vitamin B12:
- a) produces anaphylactoid reactions in bolus IV dosing
 - b) is a treatment for cyanide poisoning
 - c) is typically given in a dose of 500 - 1000 mg
 - d) deficiency is caused by renal dialysis
 - e) is absorbed in the stomach by the parietal cells
39. All of the following are known to potentiate oral anticoagulants EXCEPT:
- a) cimetidine
 - b) ceftriaxone
 - c) rifampicin
 - d) metronidazole
 - e) trimethoprim / sulfamethoxazole
40. All of the following are NSAIDs EXCEPT:
- a) sulindac
 - b) piroxicam
 - c) gemfibrozil
 - d) ketorolac
 - e) diflunisal
41. With regard to oral hypoglycaemic agents:
- a) tolbutamide and glipizide are sulphonylureas
 - b) chlopropamide has a half life of 4 - 6 hours
 - c) metformin is more effective once weight is controlled

- d) lactic acidosis is more common with metformin than phenformin
 - e) glipizide has one of the longest half lives
42. A patient with impetigo would be most likely to respond to:
- a) phenoxymethylpenicillin
 - b) streptomycin
 - c) cephalexin
 - d) kanamycin
 - e) metronidazole
43. The antiviral drug that acts on reverse transcriptase is:
- a) acyclovir
 - b) zidovudine
 - c) ganciclovir
 - d) vidarabine
 - e) all of the above
44. The volume of distribution:
- a) is less than 70L for fluoxetine
 - b) is calculated by dividing rate of elimination by concentration
 - c) is inversely proportional to half life
 - d) is about 5L/kg for pethidine
 - e) is effected by the route of drug administration.
45. By limiting liver blood flow cardiac disease might inhibit the metabolism of all of the following **EXCEPT**:
- a) verapamil
 - b) labetalol
 - c) propoxyphene
 - d) lignocaine
 - e) trimethoprim
46. The bioavailability of a drug:
- (a) must be 100% if given by inhalation
 - (b) is typically about 75% for IV administration

- (c) is high if the drug is hydrophilic
 - (d) is equal to 1 – the extraction rate
 - (e) is 70% for orally administered digoxin
47. Some of the changes in the pharmacokinetics of drugs in the elderly are due to:
- a) increased body water
 - b) increased lean body mass
 - c) increased cardiac index
 - d) increased body fat
 - e) increased hepatic blood flow
48. The most common acute adverse effect of procainamide is:
- a) bradycardia
 - b) pulmonary infiltrates
 - c) fever
 - d) hypotension
 - e) anaphylaxis
49. The CAST trial highlighted the adverse effects of:
- a) metoprolol
 - b) verapamil
 - c) sotalol
 - d) flecainide
 - e) bretylium
50. Losartan differs from enalapril in:
- a) its selective action on angiotension type one receptors
 - b) its enhanced effect on bradykinin metabolism
 - c) its prolonged half life
 - d) its higher incidence of drug related angioedema
 - e) its increased risk of cough
51. All of the following actihypertensives act directly on vascular smooth muscle **EXCEPT**:
- a) felodipine

- b) prazosin
 - c) nitroprusside
 - d) indapamide
 - e) hydralazine
52. The toxic effects of organic nitrates include:
- a) bradycardia
 - b) cyanide poisoning
 - c) methaemglobinaemia
 - d) precipitating glaucoma
 - e) bronchospasm
53. Theophylline:
- a) has a volume of distribution of 10l/kg
 - b) is a positive chronotrope
 - c) reduces glomerular filtration rate
 - d) is thought to increase blood viscosity
 - e) is less potent than aminophylline
54. The B_2 sympathomimetic with the longest duration of action is:
- a) salmeterol
 - b) sotalol
 - c) salbutamol
 - d) terbutaline
 - e) isoproterenol
55. The β lactam ring is present in all of the following classes of antibiotics
EXCEPT:
- a) penicillins
 - b) monobactams
 - c) fluoroquinolones
 - d) carbapenems
 - e) cephalosporins
56. The cephalosporin with the highest activity against grampositive cocci is:
- a) cefuroxime
 - b) cefotaxime

- c) cefaclor
 - d) cefepime
 - e) cephalothin
57. Macrolide antibiotics:
- a) are usually active against neisseria species
 - b) are bacteristatic but not bactericidal
 - c) bind at the 30s ribosomal sub unit
 - d) are unaffected by plasmid mediated resistance
 - e) enhance metabolism by cytochrome p450 pathways
58. All of the following have antiemetic action **EXCEPT**
- a) dexamethasone
 - b) diazepam
 - c) hydroxyzine
 - d) tetrahydrocannabinol
 - e) sulphasalazine
59. Regarding H₂ receptor antagonists
- a) they act via a final common pathway of h⁺/k⁺ atp ase
 - b) famotidine is more potent than rantifidine
 - c) cimetidine slows hepatic microsomal metabolism
 - d) they have been associated with reversible gynaecomastia
 - e) all of the above are true
60. Aluminium hydroxide
- a) causes milk alkali syndrome
 - b) may cause hyperphosphataemia
 - c) is contraindicated in renal failure
 - d) is associated with constipation
 - e) has been shown to effectively heal gastric ulcers

**PART 1 PHARMACOLOGY MCQ
ANSWER SHEET**

Question no:	reference:	page no:	answer:
1.	Katzung 6th	Pp 241-244	C
2.	Katzung 6th	pp 235-237	E
3.	Katzung 6th	pp 180-181	B
4.	Katzung 6th	pp 161-162	A
5.	Katzung 6th	p 139	A
6.	Katzung 6th	p 96	B
7.	Katzung 6th	pp 33-36	E
8.	Katzung 6th	pp 220-221	E
9.	Katzung 6th	pp 265 451-453	E
10.	Katzung 6th	p 464	B
11.	Katzung 6th	p 485	A
12.	Katzung 6th	p 396	C
13.	Katzung 6th	p 402	B
14.	Katzung 6th	pp 412-413	D
15.	Katzung 6th	p 596	A
16.	Katzung 6th	pp 674-677	E
17.	Katzung 6th	pp 687-689	A
18.	Katzung 6th	pp 978-979	E
19.	Katzung 6th	p991	C
20.	Katzung 6th	p515	C
21.	Katzung 6th	p311	B
22.	Katzung 6th	p329	D
23.	Katzung 6th	p342	E
24.	Katzung 6th	p345	B
25.	Katzung 6th	p357	E
26.	Katzung 6th	pp365 - 369	E
27.	Katzung 6th	p383	A
28.	Katzung 6th	pp390 - 392	B
29.	Katzung 6th	p408	C
30.	Katzung 6th	p413	C
31.	Katzung 6th	pp425 - 426	E
32.	Katzung 6th	p435	D
33.	Katzung 6th	pp449 - 452	D
34.	Katzung 6th	p457	A
35.	Katzung 6th	p467	A
36.	Katzung 6th	p473	B
37.	Katzung 6th	pp488 - 489	A
38.	Katzung 6th	pp501 - 503	B
39.	Katzung 6th	p514	C
40.	Katzung 6th	p538	C
41.	Katzung 6th	pp649 - 651	A
42.	Katzung 6th	pp683-701, 799	C
43.	Katzung 6th	pp731 - 735	E
44.	Katzung 6th	pp33 - 36	D
45.	Katzung 6th	p58	E
46.	Katzung 7 th	pp40-41	E
47.	Katzung 7 th	pp 990	D
48.	Katzung 7 th	pp 228-229	D

49.	Katzung 7 th	pp 234	D
50.	Katzung 7 th	pp 171-172	A
51.	Katzung 7 th	pp 155-156	B
52.	Katzung 7 th	pp 184-185	C
53.	Katzung 7 th	pp 330-332	B
54.	Katzung 7 th	pp 333-334	A
55.	Katzung 7 th	pp 725	C
56.	Katzung 7 th	pp 732-736	E
57.	Katzung 7 th	pp 747-749	A
58.	Katzung 7 th	pp 1022-1024	E
59.	Katzung 7 th	pp 1019 – 1020	E
60.	Katzung 7 th	pp 716,1017- 1019	D