

**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 angiotensin 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 antihypertensives 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  $\beta$  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 H<sub>2</sub> receptor antagonists

- a) they act via a final common pathway of h<sup>+</sup>/k<sup>+</sup> 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**

<b>Question no:</b>	<b>reference:</b>	<b>page no:</b>	<b>answer:</b>
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 <sup>th</sup>	pp40-41	E
47.	Katzung 7 <sup>th</sup>	pp 990	D
48.	Katzung 7 <sup>th</sup>	pp 228-229	D

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