MCQ’S

1. Which of the following could be given to someone who had an allergy to sulphonamides previously:
   a) Acetazolamide  
   b) Frusemide  
   c) Bumetanide  
   d) Pyrimethamine  
   e) Diazoxide

2. Which of the following is not a third generation Cephalosporin:
   a) Ceftriaxone  
   b) Cefoxitin  
   c) Ceftazidime  
   d) Cefotaxime  
   e) Cefoperazone

3. Which of the following is true of Cephalosporins:
   a) Cephalothin should not be used in staph infections  
   b) Cefotetan is more active against G+ves than Cephalothin  
   c) Ceftriaxone gains entry to the CSF only if the meninges are inflamed  
   d) The excretion of Ceftriaxone is mainly through the biliary tract  
   e) Cefotaxime is invariably active against Pseudomonas

4. The frequency of cross-reaction with regard to Penicillin and Cephalosporin allergy is in the range of:
   a) < 1%  
   b) 1 - 5 %  
   c) 5 - 15%  
   d) 15 - 25%  
   e) 25 - 50%
5. Adverse effects of Cephalosporins may include all of the following except:
   a) Fever
   b) Hypoprothrombinaemia
   c) Disulfiram-like reactions
   d) Thrombophlebitis
   e) Generalised lymphadenopathy

6. Adverse effects of Penicillin’s may include all except:
   a) non-allergic skin rash
   b) Hyperkalaemia
   c) Clostridia infection
   d) Hypokalaemic alkaloses
   e) Hyponatraemia

7. Which drug - mechanism of action pair is incorrect:
   a) Trimethoprim - inhibits dyhydrofolate reductase
   b) Sulphamethoxazole - competes with PABA
   c) Quinolones - inhibition of RNA gyrase
   d) Gentamicin - binds to the 30s Ribosome subunit
   e) Penicillin’s - inhibition of transpeptidases

8. Which of the following is true for Phenoxymethylpenicillin:
   a) It is not acid stable
   b) It would be taken in conjunction with meals
   c) It has a longer t½ than procaine penicillin
   d) It is active against all G+ve organisms
   e) It has effects on select G-ve bacteria

9. What drug is the treatment of choice for Gonorrhea:
   a) Penicillin IM
   b) Penicillin orally
   c) Ampicillin
   d) Ceftriaxone
   e) Gentamycin
10. Which drug would not be appropriate for a confused, drowsy but haemodynamically stable febrile 30 year old patient without a petechial rash in Australasia:
   a) Penicillin
   b) Acyclovir
   c) Ceftriaxone
   d) Flucloxacillin
   e) None of the above

11. Which of the following pairings is incorrect:
   a) Trimethoprim - urinary tract infection
   b) Trimethoprim - sulphamethoxazole - pneumocystis
   c) Vancomycin - Clostridium difficile
   d) Listeria - Ceftriaxone
   e) Anthrax - Penicillin

12. A person rings you in the emergency department for advice. He says his grandmother has taken too many of her “verapamil” tablets by mistake. What is your threshold for regarding this as potentially serious and warranting attendance to your department.
   a) Ingestion > 2 times the normal dose
   b) Ingestion > 4 times the normal dose
   c) Ingestion > 6 times the normal dose
   d) Ingestion > 10 times the normal dose
   e) Ingestion > 15 times the normal dose

13. Activated charcoal would not be useful in the following overdoses except:
   a) cyanide ingestion
   b) witnessed lithium overdose
   c) witnessed iron overdose
   d) grams of panadol taken 10 hrs ago
   e) all of the above
14. The main clinical problem with the antidote desferoxamine is
   a) allergy
   b) hypotension
   c) hepatic toxicity
   d) renal toxicity
   e) it cannot be used in pregnant patients in which overdoses of iron commonly occur

15. The toxic metabolite from a paracetamol overdose is produced via
   a) sulfuration
   b) glucoronidation
   c) conjugation
   d) oxidation
   e) deamination

16. Which of the following drugs should not be used in an organophosphate overdose
   a) Vecuronium
   b) Atropine
   c) Midazolam
   d) Suxamethonium
   e) Adrenaline

17. Calcium may be useful in all the following toxicological scenarios except
   a) Fluoride overdose
   b) B Blocker overdose
   c) Hydrofluoric acid burns
   d) Calcium channel blocker overdose
   e) Hyperkalaemia and digoxin overdose
18. All of the following may be indicated in the treatment of salicylate toxicity except
   a) Charcoal
   b) Alkalinising the urine with sodium bicarbonate and acetozolamide
   c) Potassium
   d) Suxamethonium and subsequently vecuronium
   e) Glucose

19. An overdoses that may require treatment with haemodialysis is
   a) Salicylates as there is little alternative effective treatment
   b) Alcohol as the volume of distribution is small
   c) Tricyclic antidepressants as these are toxic and the volume of distribution is large
   d) Lithium as this is toxic and the volume of distribution is small
   e) Theophylline if other treatment options fail

20. Which of the following is true regarding narcotic overdose
   a) Pethidine causes miosis
   b) Naloxone in large doses may be implicated in ARDS
   c) An overdose patient with pinpoint pupils and depressed respiration will have a narcotic overdose
   d) Inadvertent overdose of a patient with narcotics should always be treated with IM naloxone
   e) Patients are usually very grateful for your care

21. Penicillin resistance can be caused by all the following except
   a) Bacterial production of Beta-lactamase
   b) Alteration of bacterial penicillin-binding –proteins
   c) Cleavage of the 6-aminopenicillanic acid ring
   d) Substitution of N-acetylg glucosamine for N-acetylmuramic acid in the bacterial cell wall
   e) Production of an outer membrane layer in the bacterial cell wall

22. The penicillin antibiotic whose absorption is most influenced by food is
a) Amoxycillin
b) Phenoxy-methyl penicillin
c) Moxalactam
d) Oxacillin
e) Dicloxacillin

23. Regarding cephalosporin adverse effects all the following are true except

a) They can manifest all the allergic reactions seen with penicillins
b) Cefamandole and moxalactam frequently cause hypoprothrombinaemia
c) Cefamandole and moxalactam frequently cause bleeding disorders
d) Cefamandole and moxalactam may cause platelet dysfunction
e) Cefamandole and moxalactam may cause a disulfiram-like reaction

24. Regarding vancomycin

a) Is poorly orally absorbed and is therefore not used clinically by this route
b) Is the treatment of choice for Staphylococcal endocarditis
c) Has a prolonged half-life in functionally anephric patients receiving either peritoneal or haemodialysis
d) Is absolutely contraindicated in patients who develop “red man” syndrome
e) Is, unlike teicoplanin, not a glycopeptide antibiotic

25. Beta-lactam antibiotics include all the following except

a) Penicillin
b) Moxalactam
c) Loracarbef
d) Aztreonam
e) Zalcitabine

26. Regarding penicillin pharmacokinetics
a) Benzathine penicillin will provide sufficient tissue concentration to treat beta-haemolytic streptococcal infections for up to 3 weeks after a single IM dose
b) Penicillin penetrates prostate, joint spaces, the eye, and uninfammed meninges poorly
c) Penicillin excretion is predominantly renal being 90% filtered and 10% secreted into the proximal tubules
d) Neither nafcillin nor dicloxacillin require dose adjustment in renal failure
e) Penicillins are present in breast milk in concentrations of 2-5% of serum levels

27. The cephalosporin with the greatest activity against Staphylococci is
a) Cefazolin
b) Cefaclor
c) Cefuroxime
d) Ceftazidime
e) Cefepime

28. Chloramphenicol has clinically useful antibacterial activity against all the following except
a) Haemophilus influenzae
b) Neisseria meningitidis
c) Chlamydia trachomatis
d) Rickettsiae australis
e) Streptococcus pneumoniae

29. The most important mechanism of tetracycline resistance is
a) Increased active efflux from the bacterial cell
b) Direct enzymatic inactivation of the antibiotic
c) Interference with tetracycline-ribosome binding
d) Reduced passive influx due to altered cell membrane components
e) Reduced active influx by alteration of transport molecules

30) Regarding erythromycin all the following are true except
a) Cross resistance is complete with other macrolides
b) Antibacterial activity is enhanced at alkaline pH

c) Is best absorbed when formulated as lactobionate

d) Is the commonest cause of antibiotic induced cholestatic jaundice in Australasia

e) Requires dosage reduction in patients with renal failure

ANSWERS:

1  D
2 | B
3 | D
4 | C
5 | E
6 | E
7 | C
8 | E
9 | D
10| D
11| D
12| A
13| A
14| B
15| D
16| D
17| E
18| B
19| D
20| B
21| D
22| D
23| D
24| C
25| E
26| D
27| A
28| C
29| A
30| A