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Australian Pharmacy Council Ltd Knowledge Assessment of Pharmaceutical Sciences (KAPS) Paper 1 Sample 2

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The KAPS Examination is 100-questions long and candidates have 2 hours to complete it.

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The actual KAPS Examination is delivered by computer and candidates should visit the APC website for further information, including a link to an online tutorial:

<https://www.pharmacycouncil.org.au/pharmacists/overseas-trained-pharmacists/sitting-an-exam/>

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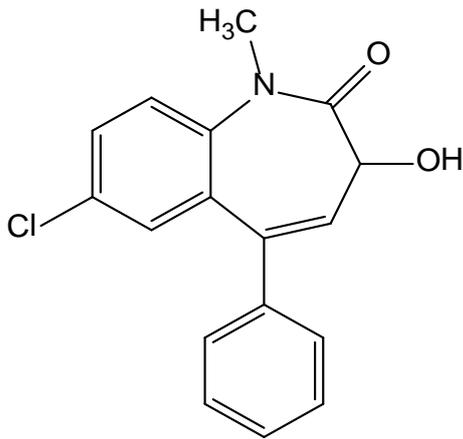
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- 1 Trimeprazine belongs to the group of drugs known as:
- A Alkylamine antihistamines
 - B Phenothiazine antihistamines
 - C Piperidine antihistamines
 - D Monoethanolamine antihistamines
- 2 Techniques involving polymerase chain reaction (PCR) can be used to identify all of the following **EXCEPT**
- A Virus types
 - B Actual DNA sequence
 - C Mutations
 - D Bacterial strains
 - E Presence of expressed RNA
- 3 The antibacterial action of a sulphonamide, resulting from its blocking bacterial uptake of p-amino-benzoic acid (PABA) is due to the presence of
- A A nitrogen containing heterocyclic ring
 - B An ionisable acidic proton
 - C A primary aromatic amino group
 - D A sulfonyl urea substituent

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- 4 To have useful antibacterial activity, a sulphonamide molecule must possess or be capable of conversion in the body into which ONE of the following?
- A An alkylated aromatic amino group
 - B An alkoxy group
 - C A chloride group
 - D A non-substituted aromatic amino group
 - E A free sulphonic group
- 5 When dimercaprol (B.A.L.) is used to treat heavy metal poisoning, its effectiveness is due to the chelate formed being all the following **EXCEPT**:
- A Water soluble
 - B Having a large stability constant
 - C Readily excreted
 - D Non-toxic
 - E Readily metabolised
- 6 The chemical bond connecting amino acids in the primary structure of proteins is
- A A double bond
 - B Hydrolytic in nature
 - C A peptide bond
 - D Between two carbon atoms
 - E Formed by hydrolysis

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- 7 Conformational isomerism is described as
- A A form of optical isomerism
 - B Cis-trans isomerism
 - C Possession of a plane of symmetry so that the (+) and (-) rotation around two asymmetric centres is equal and opposite with a resultant cancellation of optical rotatory properties
 - D The non-identical spatial arrangement of atoms in a molecule, resulting from rotation about one or more single bonds
 - E The concept that the similarities in physicochemical properties of atoms, groups, radicals and molecules arise from similar electronic structures
- 8 Which substance yields the largest number of joules per gram?
- A Carbohydrates
 - B Proteins
 - C Minerals
 - D Fats
 - E Nucleic acids
- 9 The term which describes the time required for the radioactivity of any given amount of a drug to be reduced by 50 percent is:
- A LD 50
 - B Half-life
 - C Revalue
 - D Retention time
 - E Decay value

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- 10 One property that phenytoin, phenobarbitone and rifampicin all have in common is that they
- A Exhibit nonlinear pharmacokinetics
 - B Are used for the treatment of epilepsy
 - C Are poorly absorbed
 - D Can inhibit hepatic drug metabolism
 - E Can induce hepatic drug metabolism
- 11 The gamma radiation from radioactive vitamin B₁₂ comes from the:
- A Iodine atoms
 - B Cobalt atoms
 - C Hydrogen atom
 - D Carbon atoms
 - E Phosphorus atoms

12 Temazepam, which has the structure below, would **MOST** probably undergo:

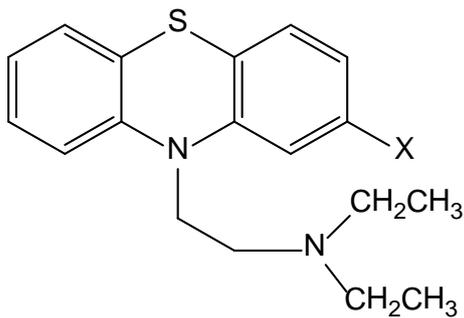


- I. direct conjugation with glucuronic acid
II. deesterification
III. N-dealkylation
- A I only
B III only
C I and II only
D II and III only
E I and III
- 13 Which of the following is **TRUE** for the hypnotic drug temazepam?
- A This benzodiazepine has a long half-life and thus induces sleep slowly
B The drug is conjugated in the liver and the drug has a relatively short half-life
C Intravenous temazepam is an anaesthetic
D The drug is metabolised to active compounds which have shorter half-lives than the parent drug temazepam
E Temazepam is not as effective a hypnotic as diazepam

14 The various penicillins that are available differ chemically

- A In the nature of the acyl side chain
- B In substituents on the fused ring nucleus
- C In spatial arrangements of atoms around an asymmetric carbon
- D In the nature of the original (naturally occurring) nucleus
- E Only by being different salts

15



The chemical class of the compound above is

- A Sulphonamide
 - B Barbiturate
 - C Phenothiazine derivative
 - D Amine salt
 - E Steroid
- 16 Which one of the following acids is polyunsaturated?
- A Oleic
 - B Glutamic
 - C Palmitic
 - D Linolenic
 - E Stearic

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- 17 Conformation of organic molecules is **MOST** commonly determined by which **ONE** of the following analytical methods?
- A Nuclear magnetic resonance (NMR)
 - B Optical rotation
 - C pK determinations
 - D Biological assay
 - E Mass spectrometry
- 18 Oleic acid exists in the cis form. This means:
- A There also exists an optical isomer of oleic acid
 - B The groups of atoms are formed with double bonds such that there is no rotation and the groups remain on the same side of the molecule
 - C A mirror image of the oleic acid molecule exists
 - D Two groups of atoms are spatially fixed around a double bond so that they are on opposite sides of the molecule
 - E The double bond is part of the ring system
- 19 Quinine sulphate
- A May be dissolved in water by the addition of a small amount of sulphuric acid to convert it to the more soluble bisulphate
 - B Has a sweet, pleasant taste
 - C Does not cross the placenta
 - D Is poorly absorbed from the gastrointestinal tract
 - E Is not affected by light

20 Which of the following compounds contains either an aldehydic or a ketonic functional group?

- A Methadone
- B Bentonite
- C Ephedrine
- D Glycerol
- E Amitriptyline

21 Lignocaine HCl can be infused intravenously and remain stable for long enough to have a therapeutic effect because it

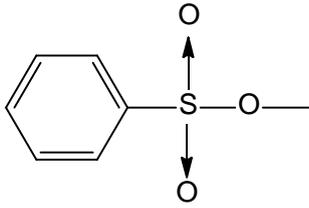
- A Is an ester
- B Is an acidic drug
- C Is an amide
- D Forms an emulsion in the blood
- E Can exchange chlorides with sodium chloride

22 Sodium lauryl sulfate is incompatible with

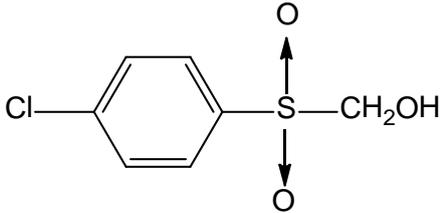
- A Cetomacrogol
- B Sodium stearate
- C Cetyl alcohol
- D Polyoxyethylene (20) sorbitan monostearate
- E Cetrimide

23 Sulphonamides differ chemically in substitutions that are made on a fundamental structure common to all. That structure is

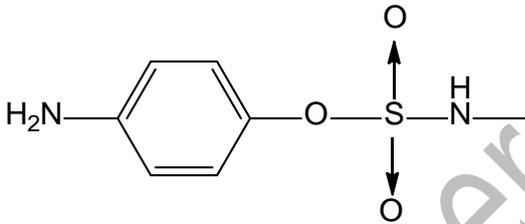
A



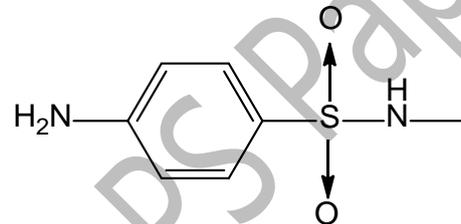
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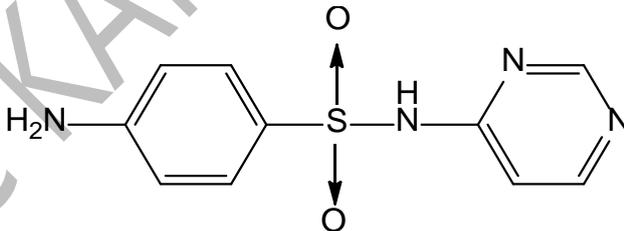
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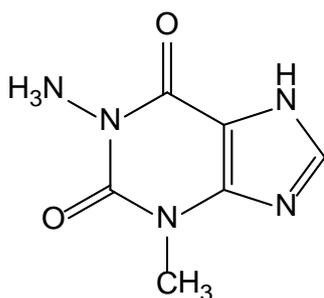
D



E



24 A potential therapeutic use for 1,3-dimethylxanthine is as a(an):

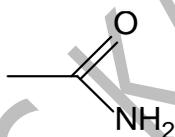


- A Anxiolytic
- B Bronchodilator
- C Hypoglycaemic
- D Hypouricaemic
- E Anticoagulant

25 The metabolism of drugs generally results in

- A Less acidic compounds
- B More acidic compounds
- C Compounds having a higher oil/water partition coefficient
- D More polar compounds
- E Compounds with lower aqueous solubility

26



Which ONE of the following does the chemical structure given above represent?

- A Aldehyde
- B Amide
- C Alcohol
- D Amine
- E Carboxyl

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- 27 Which of the following statements is **TRUE**?
- A Conformers can be distinguished by physical methods such as boiling point
 - B Meso-compounds have chiral carbon atoms and are therefore chiral
 - C The D-prefix means the compound rotates plane of polarized light to the right
 - D *Cis*- and *trans*-isomers are diastereomers
 - E All compounds which have a carbon atom with four different ligands are chiral

- 28 Reagent strips impregnated with glucose oxidase, peroxidase, and orthotolidine are dipped into urine or blood as a test for the presence of glucose.

The reaction(s) that occur are:

- A Glucose is oxidised to CO_2 , which forms carbonic acid, which turns the orthotolidine a blue colour
 - B Glucose oxidase is reduced to glucose reductase, which converts glucose to a blue colour in the presence of orthotolidine and peroxidase
 - C Glucose is oxidised to gluconic acid and hydrogen peroxide; then hydrogen peroxide in the presence of peroxidase converts the orthotolidine to a blue substance
 - D Sucrose is oxidised by glucose oxidase to glucose, which is oxidised to glucuronic acid by peroxidase and orthotolidine to form a dye
 - E Glucose oxidase and atmospheric oxygen oxidise glucose to aldehyde, which undergoes a Schiff test reaction with orthotolidine and peroxidase to yield coloured compounds
- 29 An aqueous solution of the sodium salt of an antibacterial sulphonamide would be
- A Neutral
 - B Strongly basic
 - C Weakly acidic
 - D Weakly basic
 - E Strongly acidic

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- 30 Glimepiride exerts its hypoglycaemic action by
- A Causing a direct uptake of glucose by muscle cells
 - B Increasing the metabolism of glucose
 - C Stimulating insulin release from the pancreas
 - D Causing catalytic breakdown of glucose
 - E Blocking the direct uptake of glucose by muscle cells
- 31 The therapeutic action of allopurinol in gout is due to its effect of:
- A Increasing uric acid excretion
 - B Stimulating purine breakdown
 - C Non-competitively inhibiting xanthine oxidase
 - D Decreasing hypoxanthine levels
 - E Inhibiting adenosine deaminase
- 32 Which of the following is **LEAST** likely to exacerbate seizures?
- A Alcohol
 - B Sleep deprivation
 - C Cigarette smoking
 - D Psychological stress
 - E Watching television

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- 33 Atropine
- A Is more potent than (-)-hyoscyamine
 - B Is an antidote for anticholinesterase drugs
 - C Is a quaternary amine
 - D May cause constriction of the pupil of the eye
 - E May cause diarrhoea
- 34 Which ONE of the following is associated with gingival hyperplasia after long-term treatment?
- A Irbesartan
 - B Theophylline
 - C Hydrochlorothiazide
 - D Propranolol
 - E Nifedipine
- 35 Which ONE of the following statements is **CORRECT**?
- A Arteries have thinner smooth muscle layers than veins
 - B Veins generally carry oxygenated blood
 - C Capillary walls have an elastic layer
 - D The pressure inside a vein is less than in an artery
 - E Capillaries provide the greatest resistance to blood flow

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- 36 All of the following statements about warfarin are correct **EXCEPT** for:
- A It resembles vitamin K in structure
 - B It prevents the coagulation of blood in vitro
 - C It has a delay in onset and reversal of action
 - D It prevents synthesis of coagulation factors
- 37 Parathyroid hormone has which **ONE** of the following effects?
- A Increased mobilization of calcium from bone
 - B Decreased active absorption of calcium from the small intestine
 - C Decreased renal tubular reabsorption of calcium
 - D Decreased resorption of phosphate from bone
 - E Decreased excretion of phosphate
- 38 Which **ONE** of the following is **NOT** recognized as a central neurotransmitter?
- A Serotonin (5-hydroxytryptamine, 5-HT)
 - B Noradrenaline
 - C Dopamine
 - D Cyclic adenosine phosphate (cAMP)
 - E Acetylcholine

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- 39 Levodopa is often the drug of choice in the treatment of parkinsonism. The rationale for the use of this drug is based upon which of the following?
- A A deficiency of noradrenaline in the subcortical regions of the brain
 - B Dopamine does not readily pass the blood-brain barrier
 - C Tyrosine hydroxylase is a rate-limiting enzyme
 - D Peripheral nerves are deficient in methylating enzyme
 - E Dopamine excess occurs in Parkinson's disease
- 40 Acne vulgaris:
- A Is usually the result of blocked sweat glands
 - B Is associated with the growth of *Propionibacterium acnes*
 - C Results in scarring where the lesions are occluded
 - D Involves decreased differentiation of epithelial cells
 - E Is not affected by androgen receptor activation
- 41 Which of the following is predominately excreted as an unchanged drug
- A Propoxyphene
 - B Phenytoin
 - C Acamprosate calcium
 - D Codeine
 - E Enalapril

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- 42 The term "pure opioid antagonist" most appropriately applies to which ONE of the following?
- A Flumazenil
 - B Tramadol
 - C Hydromorphone
 - D Naloxone
 - E Buprenorphine
- 43 The doses of clomiphene citrate, which is used in the treatment of infertility, should be taken on which of the following days of the menstrual cycle?
- A 0-5
 - B 5-9
 - C 10-14
 - D 20-24
 - E 24-28
- 44 What is the principal way that glyceryl trinitrate relieves the symptoms of angina pectoris?
- A Slows heart rate
 - B Reduces after-load
 - C Dilates venous capacitance vessels
 - D Constricts arterioles
 - E Dilates major peripheral arteries

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- 45 Which ONE of the following medicines is an alternative to aminoglycosides for antibiotic prophylaxis in urological surgery?
- A Ticarcillin
 - B Amoxicillin
 - C Erythromycin
 - D Cefoxitin
 - E Metronidazole
- 46 The conjugation of bilirubin occurs mainly in which ONE of the following?
The:
- A Erythrocyte
 - B Intestine
 - C Liver
 - D Reticuloendothelial system
 - E Kidney
- 47 Which ONE of the following statements about dose and response is **CORRECT**?
- A Loop diuretics have a dose response curve that reaches a maximum after a few increments of dose
 - B Thiazide diuretics have a steep and prolonged dose response curve
 - C If one drug has greater therapeutic efficacy than another then it is more potent
 - D If one drug is more potent than another drug then it can achieve a therapeutic effect of greater magnitude
 - E The therapeutic index is the maximum tolerated dose divided by the minimum effective dose

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- 48 Which ONE of the following statements is **CORRECT** with respect to congestive heart failure (CHF)?
- A The most common causes of systolic dysfunction in CHF are ischaemic heart disease and hypertension
 - B The primary abnormality in systolic heart failure is an impairment of left ventricular function leading to increased cardiac output
 - C Compensatory responses are beneficial in development and subsequent progression of CHF
 - D ACE-I dose escalation is based on symptomatic improvement
 - E Loop diuretics improve symptoms and survival in CHF patients
- 49 The cause of death in acute paracetamol overdose is due to the accumulation of toxic metabolites resulting in:
- A Hepatic necrosis
 - B Cholestatic jaundice
 - C Acute renal failure
 - D Cirrhosis
 - E Cardiomyopathy
- 50 Cyproheptadine can **BEST** be classified pharmacologically as a(an):
- A Cholinergic agent
 - B Anti-serotonin agent
 - C Prostaglandin
 - D Anti-prostaglandin agent
 - E Histaminic agent

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- 51 β -adrenergic agonists exert an inotropic effect on the myocardium because they:
- A Increase the conversion of glycogen to glucose
 - B Activate lipases
 - C Promote conversion of phosphorylase "a" to phosphorylase "b"
 - D Decrease the levels of phosphodiesterases
 - E Increase intracellular levels of calcium
- 52 Which ONE of the following has the **HIGHEST** incidence in young women?
- A Gout
 - B Lupus erythematosus
 - C Ankylosing spondylitis
 - D Rheumatoid arthritis
 - E Osteoarthritis
- 53 In regard to urinary tract infections (UTIs) the following statements are true **EXCEPT** for:
- A Coagulase negative staphylococci are a common cause of uncomplicated UTIs
 - B The finding of hyaline casts in urine is indicative of a UTI
 - C The most common bacteria in uncomplicated urinary tract infections is *E.coli*
 - D Onset is usually sudden, typically with frequency, urgency and burning or painful voiding of small volumes of urine
 - E 95 % of urinary tract infections occur when bacteria ascend the urethra to the bladder

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- 54 Which ONE of the following is the major determinant of myocardial oxygen consumption?
- A Systolic blood pressure
 - B Diastolic blood pressure
 - C Cardiac output
 - D Blood volume
 - E Myocardial fibre tension
- 55 Tinnitus, headache, nausea, and sweating are symptoms of which ONE of the following?
- A Aspirin hypersensitivity
 - B Paracetamol toxicity
 - C Ibuprofen toxicity
 - D Salicylate toxicity
 - E Paracetamol hypersensitivity
- 56 Why is allopurinol used for the treatment of gout?
- A It increased the renal excretion of uric acid
 - B It inhibits the formation of uric acid
 - C As an anti-inflammatory mechanism
 - D It inhibits prostaglandin synthesis
 - E It alters the sensitivity of pain receptors

57 Which ONE of the following steroids has markedly different physiological properties to the other four?

- A Norethisterone
- B Levonorgestrel
- C Mestranol
- D Nandrolone
- E Megestrol

58 Of the following agents, the one which possesses the greatest degree of antihistaminic action is

- A Diazepam
- B Citalopram
- C Doxepin
- D Chlordiazepoxide
- E Oxazepam

59 Which ONE of the following is **NOT** a side effect of amitriptyline?

- A Blurred vision
- B Diarrhoea
- C Dry mouth
- D Urinary retention
- E Tachycardia

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- 60 Which ONE of the following antiepileptic drugs has activity against both generalised tonic-clonic seizures and generalised absence seizures?
- A Phenytoin
 - B Ethosuximide
 - C Vigabatrin
 - D Valproic acid
 - E Carbamazepine
- 61 Mebendazole, a benzimidazole derivative used for the treatment of worm infestations, functions by:
- A Inhibiting worm metabolism
 - B Inhibiting worm reproduction
 - C Weakening the worms to enable ease of flushing by the intestine
 - D Blocking the absorption of nutrients
 - E Paralysis of the worm, detaching them from the host
- 62 Which ONE of the following describes a person with normal thyroid function?
- A Myxoedematous
 - B Basal
 - C Euthyroid
 - D Hypothyroid
 - E Hyperthyroid

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- 63 The pharmacological effects of sumatriptan arise from its ability to:
- A Antagonise the actions of serotonin
 - B Mimic the actions of serotonin
 - C Block the effects of dopamine
 - D Constrict inflamed and dilated cranial blood vessels
- 64 Which ONE of the following parasites **CANNOT** infect both animals and man?
- A Human crab lice (*Phthirus pubis*)
 - B Dog roundworm (*Toxocara canis*)
 - C Scabies mite (*Sarcoptes scabiei*)
 - D Beef tapeworm (*Taenia saginata*)
 - E Hydatid tapeworm (*Echinococcus granulosus*)
- 65 What is the range for the daily recommended allowance of calcium for women?
- A 300 - 500 mg
 - B 500 - 700 mg
 - C 700 - 900 mg
 - D 1000 - 1500 mg
 - E 1500 - 2000 mg

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- 66 Quetiapine is an atypical antipsychotic similar to clozapine, but unlike clozapine it does have significant antagonist activity at which one of the following receptors?
- A 5-hydroxytryptamine
 - B Dopamine d2
 - C Muscarinic acetylcholine
 - D Histamine H1
 - E Alpha-1 adreno
- 67 Which one of the following statements is **TRUE**?
- A Ipratropium bromide is of no benefit in patients with chronic obstructive pulmonary disease (COPD)
 - B Salmeterol may assist patients with COPD
 - C Ipratropium bromide may cause hyperkalaemia
 - D Salmeterol may cause hyperkalaemia
 - E Salmeterol is not likely to affect bone density
- 68 Chronic iodine deficiency during adult life results in which ONE of the following conditions?
- A Cretinism
 - B Myxoedema
 - C Toxic adenoma of the thyroid
 - D Primary thyrotoxicosis
 - E Hyperthyroidism

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- 69 Which ONE of the following is **NOT** a feature of psoriasis?
- A Increased cell turnover
 - B Abnormal scaling
 - C Inflammation
 - D Increased skin thickness
 - E Granulomatous lesions
- 70 Phenytoin:
- A Plasma $t_{1/2}$ is the same at all plasma phenytoin concentrations
 - B Is subject only to first order kinetics
 - C Can increase hepatic drug metabolism
 - D Activity is not affected by kidney function
- 71 Symptoms of atropine poisoning include all of the following **EXCEPT**:
- A Dry mouth, blurred vision
 - B Tachycardia
 - C Miosis
 - D Hot dry skin

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- 72 Ketorolac:
- A Is a non-steroidal anti-inflammatory drug administered intramuscularly to control post-surgical pain
 - B Is an anti-depressant with minimal anticholinergic properties
 - C Can be used in patients with active peptic ulcers
 - D Can cause CNS and respiratory depression
 - E Is commonly used in the elderly and young patients with impaired renal function
- 73 Immediate or anaphylactic hypersensitivity:
- A May occur after prolonged exposure to an antigenic material
 - B Is caused by direct contact with the noxious material
 - C Does not involve antibody production
 - D Involves IgE antibody production
 - E Effects are always generalised and produce anaphylactic shock
- 74 Cough receptors are present in which ONE of the following?
- A Cerebellum
 - B Nasopharynx
 - C Pharynx
 - D Medulla
 - E Epithelial lining of the tracheobronchial tree

75 Each of the following is a major determinant of myocardial oxygen demand **EXCEPT** for:

- A Heart rate
- B Myocardial contractility
- C Coronary blood flow
- D Left ventricular volume
- E Myocardial wall tension

76 Miosis is:

- A Dilation of the pupil
- B Constriction of the pupil
- C Nearsightedness
- D Intolerance to light
- E A blind spot in the vision

77 In which ONE of the following drugs is the pharmacological activity associated with optical isomers?

- A Warfarin
- B Carbamazepine
- C Heparin
- D Acetylcholine
- E Phenytoin

78 Which one of the following eye drops causes rapid mydriasis and has a duration effect of only 2 to 3 hours?

- A Physostigmine 0.5%
- B Homatropine 1%
- C Timolol 0.5%
- D Phospholine iodine 0.125%
- E Adrenaline eye drops 1%

79 Which ONE of the following statements concerning fats and carbohydrates is **MOST** appropriate?

Fats and carbohydrates:

- A Differ in that fats contain more oxygen than carbon
- B Are alike because they contain the same amount of nitrogen
- C Are both changed into fatty acids during digestion
- D Are alike because they both release energy in the cells
- E Are alike because neither can be stored

80 Emphysema:

- A Is usually the result of a congenital deficiency in α_1 -antitrypsin
- B Is characterised by abnormal enlargement of alveoli
- C Is always accompanied by chronic bronchitis
- D Is associated with an increase in elastic recoil
- E Is associated with impaired inspiration rather than expiration

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- 81 All of the following statements regarding tyramine are true **EXCEPT**
- A It is a direct acting sympathomimetic amine
 - B It releases noradrenaline from sympathetic nerve endings
 - C It is potentiated by monoamine oxidase inhibitors
 - D It can cause hypertension in persons treated with monoamine oxidase inhibitors
- 82 Which type of vitamin is **MOST** toxic above the tolerable upper limit?
- A Water soluble
 - B Fat soluble
 - C Vitamin C
 - D Hematopoietic
 - E Energy releasing
- 83 Discarding outdated or improperly stored tetracyclines is especially important because they may:
- A Lose all potency
 - B Become more likely to cause dental pigmentation
 - C Become insoluble and cannot be absorbed
 - D Change into more toxic forms
 - E Develop an unpleasant odour and taste

84 Two drugs may act on the same tissue or organ through independent receptors, resulting in effects in opposite directions. What is this known as?

- A Physiologic antagonism
- B Chemical antagonism
- C Competitive antagonism
- D Irreversible antagonism
- E Dispositional antagonism

85 Digoxin

- A Is bound to Na⁺/K⁺ATPase in the heart
- B Potentiates Na⁺/K⁺ATPase
- C Has a prominent effect on the transport of divalent cations
- D Would be expected to increase the potassium content of the myocardium

86 All of the following are features of hypoglycaemia **EXCEPT** for:

- A Feeling of faintness
- B Confusion
- C Disorientation
- D Sweating
- E Smell of acetone on breath

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- 87 Cardiac glycosides increase the force of contraction by
- A Stimulating the sodium/potassium pump to lower intracellular sodium levels
 - B Inhibiting the sodium/potassium pump, causing secondary rise in calcium accumulation
 - C Inhibiting cyclic AMP phosphodiesterase to increase intracellular cyclic AMP levels
 - D Increasing the removal of calcium from the cell by the sodium-calcium exchange
- 88 Cephalosporins typically covers all strains of *streptococci* **EXCEPT** for:
- A *Streptococcus viridans*
 - B *Streptococcus faecalis*
 - C *Alpha haemolytic*
 - D *Streptococcus pneumoniae*
 - E *Streptococcus milleri*
- 89 Of the following, which adverse reaction is **NOT** associated with frusemide?
- A Hyperuricaria
 - B Tinnitus
 - C Fluid and electrolyte imbalance
 - D Hypotension
 - E Metabolic acidosis

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- 90 Propranolol could be used in the management of the following conditions **EXCEPT** for:
- A Oesophageal varices
 - B Angina pectoris
 - C Cardiac dysrhythmias
 - D Parkinsons disease
 - E Migraine
- 91 Following shock, intravenous sodium bicarbonate is used to:
- A Increase blood flow to poorly perfused tissue
 - B Neutralise lactic acid
 - C Increase plasma pCO₂
 - D Depress the increased respiration caused by acidosis
 - E Increase peripheral vasodilation
- 92 The intrinsic activity or efficacy of a drug is
- A A measure of its potency
 - B Related to its maximal agonist effect
 - C Restricted to describing antagonists
 - D The negative logarithm of the concentration producing half the maximum response

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- 93 Which ONE of the following is a penicillin which is effective in the presence of penicillinase?
- A Amoxycillin
 - B Flucloxacillin
 - C Phenoxymethylpenicillin
 - D Phenethicillin
 - E Ticarcillin
- 94 Which ONE of the following is characterized by excess secretion of thyroid hormone?
- A Addison's disease
 - B Gilbert's syndrome
 - C Grave's disease
 - D Werner's syndrome
 - E Wilson's disease
- 95 The pain associated with angina pectoris is caused by which ONE of the following?
- A Spasm of the aorta
 - B Electrolyte imbalance on the myocardial surface
 - C Ventricular tachycardia
 - D Aortic stenosis
 - E Ischaemia of some area of the myocardium

PATIENT PROFILE

Patient Name: Jack Piper
Address: 14 Lakeside Drive
St Kilda VIC
Age: 65 Height: 180 cm
Sex: Male Weight: 85 kg
Allergies: No known allergies

Diagnosis

Presenting Complaint: Primary
1: Arrhythmia
2: Hypertension
3: Angina
Secondary
1: Elevated cholesterol

Medical History:

Laboratory / Diagnostic Tests

Date	Test	Reference Range
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Medication Record

Date	Medication	Quantity	Sig
30/9	Ciprofloxacin 500 mg	20	i bid
30/9	Flecainide 100 mg - 1 repeat	60	i bid
1/9	Amiodarone 200 mg - 3 repeats	100	i daily
1/9	Glyceryl trinitrate skin patch 10 mg/24 h	30	i daily
1/9	Simvastatin 20 mg - 3 repeats	30	i daily

Pharmacist's Notes

Aluminium hydroxide prn over-the-counter
Vitamin C over-the-counter
Psyllium (Metamucil)

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- 96 Simvastatin is effective in lowering:
- A LDL cholesterol
 - B HDL cholesterol
 - C LDL cholesterol and plasma triglycerides
 - D Plasma triglycerides and HDL cholesterol
 - E LDL cholesterol, plasma triglycerides and HDL cholesterol
- 97 Use of the antiarrhythmic prescribed on September 30 is limited because of which ONE of the following side effects?
- A Aplastic anemia
 - B Anorexia
 - C Thrombocytopenia
 - D Irreversible paresthesia
 - E Exacerbation of arrhythmia
- 98 Which ONE of the following should be regularly monitored for amiodarone toxicity?
- A Prostate specific antigen (PSA)
 - B Thyroid function tests (TFT)
 - C International normalised ration (INR)
 - D Serum creatinine
 - E Urinary cortisol

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- 99 Mr Piper complains of bilateral shoulder and hip muscle pain. Which ONE of the following tests is **MOST** appropriate to investigate his symptoms?
- A Complete blood count
 - B Liver function tests
 - C Thyroid function tests
 - D Electromyogram
 - E Creatine kinase
- 100 Which ONE of Mr Piper's medications is **MOST** likely to be implicated in his muscle pain?
- A Amiodarone
 - B Simvastatin
 - C Flecainide
 - D Ciprofloxacin

*** END OF PATIENT PROFILE ***

*** END OF EXAM ***

**Australian Pharmacy Council Ltd
Knowledge Assessment of Pharmaceutical Sciences
(KAPS) Paper 1 Sample 2: Answers**

Question	Correct Answer
1	C
2	B
3	C
4	D
5	E
6	C
7	D
8	D
9	B
10	E
11	B
12	E
13	B
14	A
15	C
16	D
17	A
18	B
19	A
20	A
21	C
22	E
23	D
24	B
25	D
26	B
27	D
28	C
29	D
30	C
31	C
32	C
33	B
34	E
35	D
36	B
37	A

38	D
39	B
40	B
41	C
42	D
43	B
44	C
45	D
46	C
47	E
48	A
49	A
50	B
51	E
52	B
53	B
54	C
55	D
56	B
57	D
58	C
59	B
60	D
61	D
62	C
63	A
64	A
65	D
66	C
67	B
68	B
69	E
70	C
71	C
72	A
73	D
74	E
75	C
76	B
77	A
78	B
79	D
80	B
81	A
82	B

83	D
84	A
85	A
86	E
87	B
88	C
89	E
90	D
91	B
92	B
93	B
94	C
95	E

96	C
97	E
98	B
99	E
100	B

APC KAPS Paper 1 Sample 2