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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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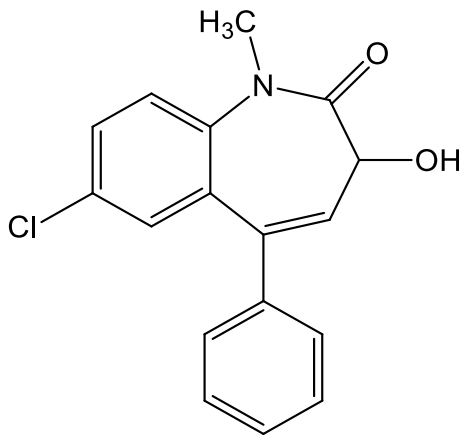
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- 1 Trimeprazine belongs to the group of drugs known as:
- A Alkylamine antihistamines
  - B Phenothiazine antihistamines
  - C Piperidine antihistamines
  - D Monoethanolamine antihistamines
- 2 Techniques involving polymerase chain reaction (PCR) 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 B<sub>12</sub> 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:

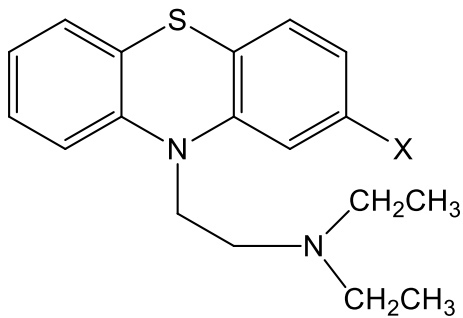


- I. direct conjugation with glucuronic acid
  - II. deesterification
  - III. N-dealkylation
- A I only
- B III only
- C I and II only
- D II and III only
- E I and III
- 13 Which of the following is **TRUE** for the hypnotic drug temazepam?
- A This benzodiazepine has a long half-life and thus induces 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

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The chemical class of the compound above is

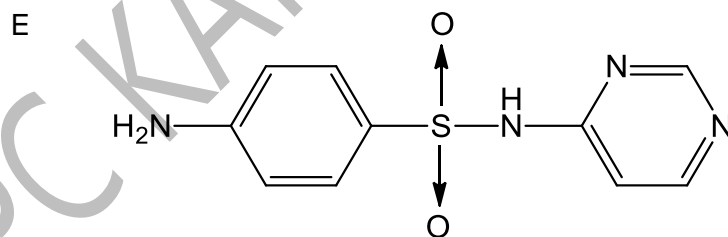
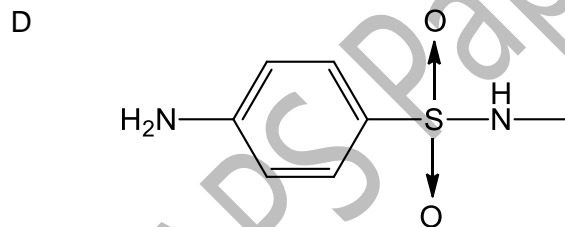
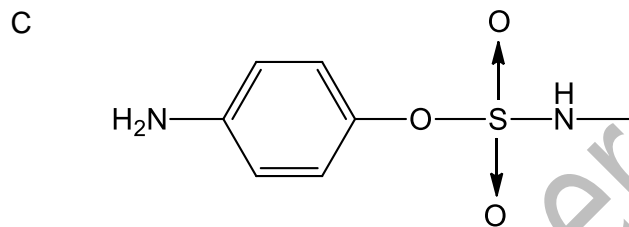
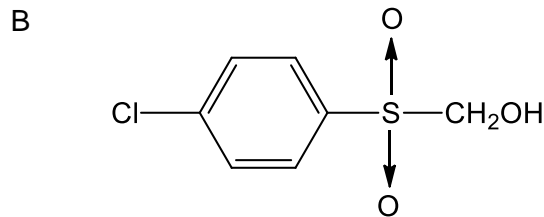
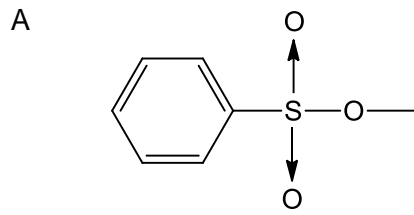
- A Sulphonamide
  - B Barbiturate
  - C Phenothiazine derivative
  - D Amine salt
  - E Steroid
- 16 Which one of the following acids is polyunsaturated?
- A Oleic
  - B Glutamic
  - C Palmitic
  - D Linolenic
  - E Stearic

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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

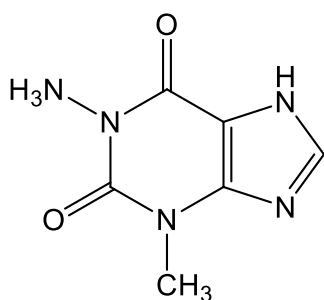


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- 20 Which of the following compounds contains either an aldehydic or a ketonic functional group?
- A Methadone
  - B Bentonite
  - C Ephedrine
  - D Glycerol
  - E Amitriptyline
- 21 Lignocaine HCl can be infused intravenously and remain stable for 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



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

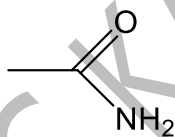


- A Anxiolytic
- B Bronchodilator
- C Hypoglycaemic
- D Hypouricaemic
- E Anticoagulant

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

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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<sub>2</sub>, 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  $\beta$ -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

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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

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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

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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  $\alpha_1$ -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

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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<sup>+</sup>/K<sup>+</sup>ATPase in the heart
- B Potentiates Na<sup>+</sup>/K<sup>+</sup>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 pCO<sub>2</sub>
- 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

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**PATIENT PROFILE**

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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

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**Diagnosis**

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

Medical History:

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**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

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**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 \*\*\*

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**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

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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

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84	A
85	A
86	E
87	B
88	C
89	E
90	D
91	B
92	B
93	B
94	C
95	E
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96	C
97	E
98	B
99	E
100	B

APC KAPS Paper 1 Sample 2