



**PROFESSIONAL EXAMINATION OF COUNCIL IN TERMS OF THE
PHARMACY ACT, 1974 (ACT 53 OF 1974)**

**APPLIED PHARMACY PRACTICE IN A LEGAL FRAMEWORK
EXAMINATION**

PRACTICE PAPER 2020

TIME ALLOWED: Four (4) hours

MAXIMUM MARKS: 120

PASS MARK: 60

In order to pass, a candidate must obtain not less than 50% in the paper.

EXAMINERS: Prof S Burton; Mrs T-L Fogarty

MODERATORS: Prof P Naidoo, D Bayever

NO OF PAGES: 27

CANDIDATE PLEASE NOTE

- (a) Ensure that you have the correct question paper for your examination.
 - (b) Ensure that all your details as requested on the cover page are filled in correctly.
 - (c) There is **15 minutes** reading time for this paper.
 - (d) Do not commence writing until you are told to do so.
 - (e) All questions are worth one mark.
 - (f) There is no negative marking for incorrect answers.
 - (g) There is only one correct answer per multiple choice question, therefore **select only one option per question.**
 - (h) Questions can be answered in any given order within the given time.
 - (i) **All questions** must be answered
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Surname: -----

First names: -----

P Number: -----

ID/Passport number: -----

Date: -----

	Marks awarded		Final Mark
	Examiner	Moderator	
ELO 1			
ELO 3			
ELO 4			
ELO 5			
ELO 6			
ELO 7			
ELO 8			
ELO 9			
ELO 10			
TOTAL			
Examiner		Moderator	

Questions 1 – 4

Use the case scenario below to answer questions 1 – 4

You have been newly appointed as the responsible pharmacist at a community healthcare centre (CHC). Your responsibilities include ensuring that the facility meets legal requirements and that the pharmacy staff are suitably trained.

1. On arrival in the pharmacy you would be MOST concerned if there is a lack of:
 - (a) Suitable electronic equipment for the counting of tablets and capsules
 - (b) Stainless steel dispensary counters
 - (c) A suitable means for controlling the temperature in the dispensary
 - (d) A computer system for stock control

You soon identify a need for training the pharmacy staff at the CHC on communicating with patients. Questions 2, 3 and 4 specifically relate to communication.

2. When discussing sensitive and personal issues with a patient that may involve significant lifestyle changes and treatment issues, how should the patient's family be involved in this process?
 - (a) The patient's family should always be actively involved in the conversation
 - (b) The patient's family is not an important participant in the conversation
 - (c) The pharmacist or pharmacist's assistant should always decide whether to include the family based on the patient's wishes
 - (d) The pharmacist should contact the family prior to speaking with the patient
3. When a pharmacist or pharmacist's assistant is counselling a patient, the perceptual filters of life experience, personality, ego, values and culture:
 - (a) Are occurring only within the patient
 - (b) Make little difference for the pharmacist or pharmacist's assistant, because they are in the professional role and can "see" beyond such issues
 - (c) Are occurring only within the pharmacist or pharmacist's assistant
 - (d) Occur both within the patient and pharmacist/pharmacist's assistant
4. Which rules in terms of code of conduct are influencing the need for staff to be trained on communication?
 - (a) 1.1 Wellbeing of the patient
 - (b) 1.3 Confidentiality
 - (c) 1.4 Continuing professional development
 - (d) 1.5 Co-operation with health care professionals

Questions 5-10

A pharmacy compounds progesterone creams using the following formula.

Progesterone 50 mg/g in VersaBase Cream			
Rx (for	Ingredient		
100 g):	<i>Progesterone, micronized</i>		<i>5 g</i>
	<i>Pentylene glycol</i>		<i>10 g</i>
	<i>VersaBase Cream</i>	<i>qs</i>	<i>100 g</i>

Answer questions 5-10 that follow.

5. When can compounding take place in a community pharmacy?
 - (a) When the compounded product is for not more than a 30-day supply
 - (b) When the compounded product is for bulk distribution to patients
 - (c) When the pharmacist gives permission for bulk compounding
 - (d) Only if the recipe appears in the British Pharmacopeia (BP)
6. Equipment used for compounding this cream must be designed and maintained in such a way as to adhere to all the following, EXCEPT:
 - (a) Be suitable for weighing raw materials
 - (b) Facilitate cleaning of tiles and spatula's
 - (c) Minimise contamination of micronised progesterone and the containers
 - (d) Minimise the risk of confusion during sterilisation
7. According to Good Manufacturing Standard practices, all of the following cadres of personnel can assist in the compounding of this non-sterile, external use only, cream, EXCEPT:
 - (a) General healthcare worker
 - (b) Pharmacist's assistant (learner basic)
 - (c) Pharmacist intern
 - (d) Pharmacist's assistant (post-basic)
8. How many years must records for medicines that are compounded in a pharmacy be kept?
 - (a) 3 years
 - (b) 2 years
 - (c) 5 years
 - (d) 10 years
9. In addition to records of compounding that need to be kept, records of distribution of the cream also need to be kept.
 - (a) True
 - (b) False
10. What additional instruction needs to be included on the label for this cream besides the requirements stipulated in regulation 10 (6) of the General Regulations?

- (a) "Do not use for more than 10 days continuously without consulting a medical practitioner"
- (b) "Use within 30 days"
- (c) "Sugar free"
- (d) "Shake before use"

Questions 11-13

Questions 11-13 relate to the sample packaging for Clear Eyes® (naphazoline) (S2) eye drops below.



11. What is this packaging known as in the Medicines and Related Substances Act 101 of 1965?
 - (a) Primary packaging
 - (b) Immediate container
 - (c) Outer label
 - (d) Folding carton

12. The following information should appear on the external label of Clear Eyes® eye drops EXCEPT:
 - (a) "Contains tartrazine"
 - (b) "Keep out of reach of children"
 - (c) "For external use only"
 - (d) "Do not use more than 30 days after opening"

13. How would you be able to tell if this was a counterfeit product or not?
- (a) The schedule is missing
 - (b) There is no registration number
 - (c) The storage instructions are not included on the label
 - (d) The manufacturer's name does not appear on the label

Questions 14 - 25

Use the case scenario below to answer questions 14 -25

As a newly appointed pharmacist at Healthwise Pharmacy you have been allocated the responsibility of managing the logistical aspects of medicine selection, procurement, storage and disposal.

14. Policies relating to the logistical aspects of medicine procurement are necessary to ensure:
- (a) Patients receive medicines that have been suitably stored
 - (b) Medicines are available when required
 - (c) Effective batch recall of medicines is possible when necessary
 - (d) Optimal storage conditions are monitored
15. The following is NOT normally used in calculating the quantity of a medicine that needs to be purchased:
- (a) Quantity of the medicine specified for a standard course of treatment
 - (b) Number of treatment episodes of the health problem for which the medicine is used
 - (c) Average monthly consumption of the medicine
 - (d) Number of manufacturers of the medicine under consideration
16. When purchasing medicines for sale in the pharmacy the following procurement criteria are important considerations when choosing a vendor:
- (a) Vendor verification, vendor reliability and cost
 - (b) Vendor size, vendor reliability and cost
 - (c) Vendor verification and reliability
 - (d) Vendor reliability and cost
17. You want to purchase cost-efficient medicines to stock the shelves of the pharmacy with. When making a choice between two therapeutically equivalent products of blood pressure medication, from a pharmacoeconomic perspective, the simplest type of study on which you can base your decision is a:
- (a) Cost-minimisation study
 - (b) Cost effectiveness study
 - (c) Cost-benefit study
 - (d) Cost utility study
18. When making a choice between two generic products of valsartan, from a pharmacoeconomic perspective, the simplest type of study on which you can base your decision is a:

- (a) Cost-minimisation study
 - (b) Cost effectiveness study
 - (c) Cost-benefit study
 - (d) Cost utility study
19. The following is TRUE about the physical attributes of a brand name drug versus a generic drug:
- (a) They can be similar
 - (b) They must be identical
 - (c) They must be identical except for colour
 - (d) They are never significantly different
20. If a new batch of valsartan tablets (160 mg 28 tablets per box) are received and they have the following details on the side of each box:
- EXP 05 2022
LOT BKU49
MFD 06 19
- The last date on which a box of the newly received valsartan products should be dispensed is:
- (a) 28th February 2022
 - (b) 31st March 2022
 - (c) 1st May 2022
 - (d) 31st May 2022
21. You are responsible for training a pharmacist's assistant in the use and maintenance of the fridge. Which of the following statements is MOST appropriate?
- (a) Wait until there is 10 mm of ice on the evaporator before defrosting the fridge to ensure stability of the cold chain
 - (b) The thermometer used in the fridge must be a minimum / maximum thermometer
 - (c) The temperature of the fridge should be monitored and recorded at least twice a day
 - (d) The fridge must be connected to an emergency power system to ensure uninterrupted power supply
22. A regular patient returns tablets to the pharmacy due to treatment cessation. The patient did not use any of the tablets and the container is still sealed. You have another patient on the same tablets. What is the MOST appropriate manner in which to handle the situation?
- (a) Accept the tablets back for destruction according to legal requirements
 - (b) You cannot accept the tablets
 - (c) Take the tablets back and give it to the other patient on the same treatment
 - (d) It is for the patient to decide whether or not they want to donate the tablets to the other patient
23. According to the Medicines and Related Substances Act 101 of 1965, as amended, in what circumstances should a pharmacist provide an interchangeable multi source medicine (IMM) to a patient?

- (a) If the medical practitioner prints non-substitutable on a prescription
 - (b) If the patient determines to take what was prescribed by the medical practitioner and pay a levy to the medical aid
 - (c) The pharmacist is obligated to give the patient the option of an IMM if there is one available
 - (d) The price of the IMM is higher than that of the prescribed medicine
24. As the logistics pharmacist, how would you be able to tell whether scheduled medicines that are received from wholesalers have been evaluated by SAHPRA?
- (a) It does not state that it has been evaluated
 - (b) It does not claim to cure a disease
 - (c) It does not have a registration number
 - (d) It does not state that it has genetically modified substances in it
25. What information needs to be recorded by a waste treatment facility authorised by SAHPRA to dispose of scheduled substances?
- i. only a pharmacist may dispose of a scheduled substance
 - ii. the name of the medicine and schedule of the medicine
 - iii. quantity destroyed
 - iv. the date the medicine was removed from the shelf of the pharmacy
- (a) i is correct
 - (b) i, ii and iii are correct
 - (c) ii and iii are correct
 - (d) ii, iii and iv are correct

Questions 26 - 36

Pharmacist Dave receives a prescription for Methylphenidate HCl® (see prescription below). Answer the related questions (26-36)

Dr DC Prescriber (MBChB)
9 Script Rd
Medicineville
6054
MP 43345

2 May 2018

Ms 7 Frankie (1002180012082) (10 years)
12 Highland Rd
Parktown

Rx: Methylphenidate HCl 10 mg

sig: 1 d

(30 – Thirty)

Rpt 3/12

DC Prescriber


26. What schedule is methylphenidate HCl (Ritalin®) registered as in the Schedule of Medicines pertaining to Act 101 of 1965?
- (a) S3
 - (b) S4
 - (c) S5
 - (d) S6
27. From what date is the prescription no longer valid, if “today” is the 2nd May 2018?
- (a) 30th May 2018
 - (b) 1st June 2018
 - (c) 1st July 2018
 - (d) 1st August 2018

28. In what ways are the legal requirements of the prescription not met?
- (a) The practise number is not provided
 - (b) The prescription is repeatable
 - (c) The patient details are incomplete
 - (d) The prescriber details are incomplete
29. The following is TRUE regarding the register for Methylphenidate HCl except:
- (a) It must be balanced at the end of March, June, September and December
 - (b) The name and address of the prescriber must be recorded
 - (c) The batch number of the medication must be recorded
 - (d) The name and address of the patient must be recorded
30. Which category of person working in the pharmacy may sell this medicine under the supervision of a pharmacist
- (a) pharmacist intern
 - (b) pharmacist's assistant (learner basic)
 - (c) pharmacist's assistant (basic)
 - (d) pharmacy technician
31. If the patient was not able to come into the pharmacy to fill the prescription and the medical practitioner phoned and gave the pharmacist a verbal prescription for the Methylphenidate HCl, which of the following statements would be TRUE?
- (a) the pharmacist does not need to know the prescriber
 - (b) the treatment period should not exceed 48 hours
 - (c) a written prescription is not necessary
 - (d) the treatment can be given on a recurring basis
32. Before making an evaluation about the appropriateness of methylphenidate for Ms Frankie, it is most important to obtain her:
- (a) Family medical history
 - (b) Current medical history
 - (c) Medical aid status
 - (d) Dietary information
33. Considering the age of Ms Frankie:
- (a) The use of methylphenidate is not appropriate
 - (b) The daily dose of methylphenidate is appropriate
 - (c) The daily dose of methylphenidate is too high
 - (d) The daily dose of methylphenidate is too low
34. Ms Frankie has been newly diagnosed with attention deficit hyperactivity disorder (ADHD). The most appropriate counselling point to make is:
- (a) The patient should chew the tablet and drink a full glass of water afterwards
 - (b) The tablet should be taken at night after supper
 - (c) Dissolve the tablet in half a glass of water and drink this after breakfast

- (d) The medication should be taken in the morning before breakfast
35. When recording the dispensing of the methylphenidate to Ms Frankie beyond the minimum legal requirements, good practice suggests that you should also record:
- All other pharmacy purchases made simultaneously
 - The disease state being treated [ICD10 code]
 - Patient behaviour in the pharmacy
 - Patient or caregiver's feelings about taking the medicine
36. The counselling details provided for Ms Frankie should be recorded in the patient record:
- Because the law requires it
 - In order to ensure patient compliance
 - In case it is required for potential litigation cases
 - To facilitate continuity of patient care

Questions 37 - 50

A patient, Mrs Sweet visits your pharmacy with the prescription below. Answer the related questions (37 - 50):

 Dr JA Steyn		MP no. 0552461 Pr no. 0197327 +27 84 444 1939 drjasteyn@gmail.com
Name: Mrs M Sweet		Age: 56 years
Address: 2 Mountain Villa 35 Smith Rd		Date: 15/05/20
<h1>R_x</h1>		
1.	Metformin 500mg bd	56
2.	Lantus prefilled pens 15 Units mane sc	
3.	Enalapril 10mg od	28
4.	Hydrochlorothiazide 25mg od	28
Repeat all x6		
Dr JA Steyn		
PO Box 105, Wilgeheuwel , Roodepoort, 1736		

37. The short term aims of diabetic management include:

- (a) Avoiding vascular complications
 - (b) Overcoming ketoacidosis and catabolism, and restoring nutrient reserves
 - (c) Increasing life expectancy
 - (d) Preventing vision loss
38. If a patient with a diagnosis of diabetes similar to that of Mrs Sweet is treated with insulin:
- (a) The insulin is always given once a day
 - (b) The insulin dose will eventually be increased to twice a day injections
 - (c) The insulin dose must be adjusted daily to match dietary carbohydrate intake
 - (d) The insulin dose will be determined in accordance with the patient's specific needs
39. The number of Lantus prefilled pens that you would dispense to Mrs Sweet would be:
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
40. With respect to the dosing of Mrs Sweet's Lantus, the best instructions to place on the label would be:
- (a) Inject 15 Units mane sc
 - (b) Inject 15 units every day
 - (c) Inject 15 units sub-cutaneously every morning
 - (d) Inject 15 units sub-cutaneously at the same time every morning
41. With respect to the storage of Mrs Sweet's Lantus, the best instructions to place on the label would be:
- (a) Store in the door of a refrigerator, at all times, when not in use
 - (b) Store below 30°C, out of direct sunlight
 - (c) Before opening store in a refrigerator and after opening store below 30°C
 - (d) Store in a refrigerator (2 - 8°C)
42. When speaking to Mrs Sweet about her medication, you should:
- (a) Be as formal as possible
 - (b) Speak like one pharmacist would to another pharmacist
 - (c) Use plain language
 - (d) Talk as quickly as possible
43. Mrs Sweet's target fasting blood glucose level should be:
- (a) Between 5.0 and 11.1 mmol/L
 - (b) Between 4.0 and 7.0 mmol/L
 - (c) Less than 7.0 mmol/L
 - (d) Greater than 7.0 mmol/L
44. Mrs Sweet's blood HbA1C levels should be monitored:

- (a) Daily
 - (b) Weekly
 - (c) Monthly
 - (d) Every three months
45. Which of the following cadres of pharmacy support personnel may assist in Phase 2 of dispensing of this prescription?
- (a) Community health worker
 - (b) Pharmacists assistant learner basic
 - (c) Pharmacists assistant basic
 - (d) Pharmacists assistant learner post-basic
46. Which of following warnings should appear on all the manufacturers labels of the prescribed medicines?
- (a) "Contains tartrazine"
 - (b) "Keep out of reach of children"
 - (c) "For external use only"
 - (d) "Do not use more than 30 days after opening"
47. If Mrs Sweet sent her 12-year old son in to collect her prescription, which of the following statements would be true?
- (a) The pharmacist requires verbal permission from Mrs Sweet to be able to dispense the prescription.
 - (b) The pharmacist needs to have a signed letter from Mrs Sweet, who is known to him, to be able to dispense the prescription.
 - (c) The pharmacist can dispense the prescription provided they follow GPP guidelines during the dispensing procedure.
 - (d) The pharmacist may not dispense the prescription.
48. The prescription asks for 56 metformin 500 mg tablets. The manufacturers container comes in a pack size of 60 tablets. Which course of action is correct from a legal perspective?
- (a) Dispense the 56 tablets as it appears on the prescription
 - (b) Sell the 60 tablets as this will preserve the packaging
 - (c) Call the prescriber and ask him to change the quantity to 60 on the prescription
 - (d) Change the quantities of all items on the prescription to a 30-day supply
49. All of the items on the prescription are scheduled substances. In which schedule of medicine/s are they registered?
- (a) S2, 3 and 4
 - (b) S3 only
 - (c) S3 and S4
 - (d) S4 only
50. How long must the written prescription be filed for?
- (a) 2 years
 - (b) 3 years
 - (c) 5 years
 - (d) 10 years

Questions 51 - 60

Questions 51 – 60 relate to services provided by a pharmacist at a primary health care (PHC) clinic.

51. A nurse calls the dispensary to enquire about the availability of activated charcoal for a 25-year-old woman who has overdosed on 15 g of paracetamol. What would be the most correct thing for the pharmacist to do or advise?
- (a) Provide the activated charcoal and advise the nurse to call the Poisons Information Helpline to ascertain the correct dose
 - (b) If ingestion of the paracetamol was within the previous hour provide a 50 g slurry of activated charcoal
 - (c) Provide a 100 g slurry of activated charcoal ensuring that the water is added to the charcoal when preparing it and not vice versa
 - (d) Urgently refer the patient to the hospital nearby for paracetamol blood levels and consideration of treatment with acetylcysteine
52. The community service doctor has a needle stick injury from a hollow injection needle that was being used to draw blood from an HIV positive patient with a high viral load. What would you advise the doctor with regards to taking post exposure prophylaxis (PEP)?
- (a) Await confirmatory test results on both the source patient and himself before initiating PEP
 - (b) If the source patient is on tenofovir then tenofovir must be used for PEP
 - (c) Initiate PEP immediately with a tenofovir, emtricitabine and atazanavir/ritonavir combination
 - (d) Initiate PEP within 14 days after exposure
53. Which statement regarding the administration of emergency contraception to a 13-year-old female rape victim is NOT correct?
- (a) A pregnancy test must be performed to exclude pregnancy prior to administering emergency contraception
 - (b) Emergency contraception must only be administered if the girl has experienced menarche (first menstrual bleeding)
 - (c) Emergency contraception must be taken within 24 hours of the rape incident
 - (d) Levonorgestrel 1.5 mg should be administered as a single dose as soon as possible after the rape incident
54. Patient adherence is the extent to which:
- (a) A patient complies with a prescribed medication regimen
 - (b) A patient's behaviour – taking medication, following a diet and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider
 - (c) A patient's behaviour – taking medication, following a diet and/or executing lifestyle changes, corresponds to the directions given by a health care provider
 - (d) A patient's response to medicines and therapeutic outcomes correspond with the goals of treatment

55. A health care provider can promote patient adherence to medication by:
- (a) Focusing on and warning patients about the negative aspects of therapy
 - (b) Providing realistic expectations regarding the improvement that therapy can add to the quality of life
 - (c) Assuring the patient that any side effects will disappear after continued use
 - (d) Discussing only the therapeutic goals that are likely to be experienced by the patient and not those outcomes that may be asymptomatic
56. In the interests of safe medicine use, a pharmacist at a PHC clinic is campaigning to increase adverse drug reaction (ADR) reporting. Who should be encouraged to report ADRs?
- (a) Only the healthcare professionals involved in the initiation of new prescriptions
 - (b) Healthcare professionals directly responsible for prescribing
 - (c) Pharmacists only
 - (d) All healthcare professionals
57. An ADR should be reported:
- (a) Only if the reaction is life threatening
 - (b) Only if there is certainty that the medicine caused the event
 - (c) For all medicines newly marketed or new medicines added to the Essential Medicines List
 - (d) For registered medicines only
58. From which class of products should adverse experiences be reported?
- (a) Medications (drugs, vaccines and biologicals)
 - (b) Medical devices (including *in-vitro* diagnostics)
 - (c) Complementary / alternative medicines (including traditional, herbal remedies)
 - (d) All of the above
59. The appropriate authority to report ADRS to would be:
- (a) The South African Pharmacy Council call centre
 - (b) The South African Health Products Regulatory Authority via its dedicated unit
 - (c) The Pharmaceutical Society of South Africa
 - (d) The Pharmaceutical Manufacturers Association of South Africa
60. The National Department of Health's Standard Treatment Guidelines for PHC:
- (a) Only contains recommendations that are aligned with the South African Healthcare Products Regulatory Authority (SAHPRA) registered medication labels or package inserts
 - (b) Restrict prescribers and do not encourage them to exercise sound clinical judgment
 - (c) May be reasonably adapted by Provincial Pharmaceutical and Therapeutics Committees according to local circumstances and available expertise

- (d) Are always synchronised with public sector pharmaceutical tenders

Questions 61 - 71

The following scenario relates to questions 61 - 71.

Miss A Kewt (11 years) is visiting her friend who has a new puppy. The friend's mother notices that Miss A Kewt has become rather quiet and seems to be wheezing. Miss A Kewt has three inhalers in her bag:

- **Pulmicort[®] Turbuhaler (Budesonide) 100 µg bd**
- **Venteze[®] pMDI (Salbutamol) mdu**
- **Serevent[®] Accuhaler (Salmeterol) nocte**

61. Which of the following is NOT a common trigger of bronchoconstriction in asthmatics?
- (a) Viral infections
(b) Exercise
(c) Allergens, such as pollen or animal dander
(d) Caffeine containing beverages such as coffee
62. Which inhaler/s should Miss Kewt use to achieve rapid bronchodilation?
- (a) Budesonide
(b) Salbutamol
(c) Salmeterol
(d) Both budesonide and salbutamol
63. Under what conditions should Miss Kewt be taken to hospital?
- (a) Her breathing rate decreases to less than 30 breaths per minute, but she continues to wheeze
(b) If she stops wheezing, her heart rate increases, and she becomes drowsy
(c) Her heart rate increases when she uses her reliever medication even though she is able to breathe more easily
(d) She starts crying and says she can't breathe

Miss A Kewt's mother comes in the next day to thank you and asks for some advice regarding her daughter's medication and managing her asthma.

64. Mrs Kewt is concerned that her daughter is getting repeated oral thrush with the daily use of budesonide. Good advice to give her to prevent the oral thrush would be:
- (a) Use a spacer with the turbuhaler
(b) Drink a full glass of water after inhaling
(c) Rinse the mouth after inhaling
(d) Rinse the mouthpiece of the turbuhaler under a running tap after use
65. Co-ordinated and correct pMDI use includes which of the following:
- (a) Tilting the head slightly forwards
(b) Taking a fast and hard inspiratory breath
(c) Actuating the device before beginning to inspire

- (d) Holding the breath for 10 seconds after inspiration
66. The appropriate volume spacer for Miss Kewt to use with the pMDI would be:
- (a) 150 ml
 - (b) 250 ml
 - (c) 500 ml
 - (d) 750 ml
67. Co-ordinated and correct Accuhaler use includes which of the following:
- (a) Tilting the head slightly forwards
 - (b) Taking a fast and hard inspiratory breath
 - (c) Actuating the device before beginning to inspire
 - (d) Holding the breath for 10 seconds after inspiration
68. Good advice to give regarding the use of the Accuhaler would be to:
- (a) Never turn the device upside down after twisting to release the dose
 - (b) Rinse the device with clean water after use
 - (c) Give the device a good shake before taking the dose
 - (d) Make sure that the device is always stored in its box
69. Mrs Kewt has been trying to use a peak flow meter to monitor her daughter's response to asthma therapy, and although she was told to get her daughter to do three readings each morning she is not sure which reading to record. Which reading do you advise her to record?
- (a) The first reading
 - (b) The last reading
 - (c) The highest reading
 - (d) The average of the three readings
70. If Miss Kewt's personal best peak expiratory flow (PEF) rate is 160 L/min before the use of a bronchodilator what PEF rate would be regarded as adequate control?
- (a) 80 L/min
 - (b) 128 L/min
 - (c) 144 L/min
 - (d) 160 L/min
71. Educating patients with asthma about their condition enables them to:
- (a) Accept that there is little they can do to reduce their symptoms and avoid exacerbations
 - (b) Understand why they should avoid exercise, a common asthma trigger
 - (c) Understand the importance of regular doses of inhaled corticosteroid
 - (d) Understand the importance of regular doses of inhaled salbutamol

Questions 72 -79

Use the case scenario below to answer questions 72 - 79

Mrs Pain is a 65-year-old woman who visits your pharmacy. She is suffering from severe hip and knee pain, and on the advice of her friend, she wants to buy indometacin tablets.

72. In the schedule of medicines, in what schedules is indometacin registered?
- (a) S1, S2 and S3
 - (b) S2, S3 and S4
 - (c) S3 and S4
 - (d) S4 and S5
73. What is the correct action the pharmacist should take in the scenario?
- (a) The pharmacist can issue the patient 30 indometacin 25 mg capsules
 - (b) The pharmacist can issue the patient indometacin 25 mg capsules, but only 5 days' supply
 - (c) The pharmacist can issue the indometacin 25 mg in the case of an emergency, whilst the patient makes an appointment to see the medical practitioner
 - (d) The pharmacist may not issue the 25 mg indometacin for the treatment of arthritis without a prescription from an authorised prescriber
74. The 30 indometacin [Arthrexin®] capsules are repackaged from a larger container of 100 capsules into a tablet vial and labelled each time the patient requests it. Is it a legal requirement for the expiry date and batch number of the medicine to appear on the label?
- (a) Yes
 - (b) No
75. Before making an evaluation about the appropriateness of indometacin for Mrs Pain, it is MOST important to obtain the following information from her:
- (a) Her exact date of birth and her address
 - (b) Her family medical history
 - (c) Her current medical history
 - (d) Her medical aid status
76. The following would be an example of an open-ended question to obtain relevant information from Mrs Pain:
- (a) How are you going to pay for this?
 - (b) Are you currently taking any medication for your pain?
 - (c) Please tell me about any medicines you are taking?
 - (d) Have you taken indometacin before?
77. When asked for an over-the-counter medication by name, pharmacists need to assess a patient's understanding of the medication for all of the following reasons EXCEPT:
- (a) Assuring correct medication use
 - (b) Assuring patient safety

- (c) Limiting risk for patient harm
 - (d) Confirming diagnosis of their illness
78. Current use of the following medicine by Mrs Pain, would suggest that indometacin is contra-indicated for her:
- (a) Lansoprazole
 - (b) Phenylephrine
 - (c) Paracetamol
 - (d) Ispaghula husk
79. Mrs Pain, experiencing the following combination of adverse effects whilst taking indometacin, would warrant submission of a report to the National Adverse Drug Event Monitoring Centre:
- (a) Headache and light-headedness
 - (b) Indigestion, diarrhoea and abdominal pain
 - (c) Stiff neck, severe light sensitivity and headache
 - (d) Skin reaction and itchiness

Questions 80 - 82

The following scenario relates to questions 80 to 85

You are working as a pharmacist in a community pharmacy when Mrs Mbete rushes her 16-year-old son Sam into the pharmacy. It is Saturday afternoon, Mrs Mbete and Sam are on holiday, and Sam has just been stung by a bee. Mrs Mbete has made unsuccessful attempts to call her doctor and she is very concerned because Sam is allergic to bees.

80. Sam is showing signs of severe bronchospasm, dyspnoea, wheezing and chest tightness. He is also very flushed, complaining of dizziness and has swollen lips and tongue. The area around the sting is very red and swollen. What would you do?
- (a) Nebulise Sam with salbutamol to treat the bronchospasm
 - (b) Give Sam a dose of chlorpheniramine
 - (c) Suggest Mrs Mbete takes him to the nearest hospital which is a thirty-minute drive away
 - (d) Contact the nearest doctor and obtain a verbal prescription for an EpiPen® (adrenaline) auto-injector which you dispense to Mrs Mbete with instructions for use
81. When you have stabilised Sam, you should:
- (a) Remove the sting using tweezers
 - (b) Remove the sting by squeezing
 - (c) Remove the sting by scraping a blunt object across the area
 - (d) Do not remove the sting but cover the site with a drawing ointment
82. The Professional Information for Medicines [PIM] (previously known as package insert) for chlorpheniramine lists “allergic reaction” as a possible side effect and “acute asthma attacks” as a contra-indication. This would imply that:

- (a) Chlorpheniramine should not be used in the treatment of an allergic reaction
 - (b) Chlorpheniramine may cause an acute asthma attack
 - (c) Chlorpheniramine may be used in an acute asthma attack
 - (d) In sensitive patients chlorpheniramine may result in an allergic reaction
83. Chlorpheniramine is registered as a S2 medicine. When a patient requests to purchase chlorpheniramine by name, which statement is the MOST correct?
- (a) It cannot be sold to the patient without a written order from an authorised prescriber
 - (b) The pharmacist must get a verbal prescription from a medical practitioner
 - (c) The use of chlorpheniramine requires a diagnosis from a medical practitioner
 - (d) A pharmacist must confirm that the patients' symptoms match their request to use chlorpheniramine when the patient does not have a prescription
84. According to the schedules of medicine, what is the maximum number of chlorpheniramine 4 mg tablets that can be dispensed when the patient does not have a prescription from an authorised prescriber?
- (a) 3
 - (b) 15
 - (c) 30
 - (d) quantity is unrestricted
85. What information must be recorded in the sale of chlorpheniramine 4 mg tablets when sold as a non-prescription medicine?
- (a) No records are needed as it is sold as non-prescription medicine
 - (b) Name and contact details of the purchaser if they are not the patient
 - (c) The name of the authorised prescriber of the medicine
 - (d) Name, identification number and address of the patient

Questions 86 - 89

Questions 86 to 89 concern the following active pharmaceutical ingredients (API):

- A. Guaiphenesin
- B. Diphenhydramine
- C. Phenylephrine
- D. Pseudoephedrine
- E. Oxymetazoline
- F. Flurbiprofen
- G. Antazoline
- H. Loratadine

For each case scenario below select from A to H above, the MOST appropriate API for the patient. (The selected API may be one that is commonly given in combination)

86. A 5-month-old baby with nasal congestion who is breast-feeding
87. Adjunctive therapy for a truck driver with seasonal rhinitis who already uses intranasal beclomethasone
88. A 40-year-old woman, who has had a cold for the past ten days with a purulent nasal discharge. She now presents with a localised, orbital, and unilateral headache, which is exacerbated by bending forward.
89. A 45-year-old hypertensive man with has had a cold for the past 3 days and is struggling to sleep because of a post nasal drip which is causing an irritating cough at night

Questions 90 - 92

Questions 90 to 92 concern the following active pharmaceutical ingredients (API):

- A. Codeine
- B. Aspirin
- C. Ergotamine
- D. Ibuprofen
- E. Colchicine
- F. Paracetamol

For each case scenario below select from A to F above, the MOST appropriate API for the patient. (The selected API may be one that is commonly given in combination)

90. A 17-year-old girl who presents with menstrual pain which is affecting her school attendance
91. A 55-year-old man presenting with an acute episode of pain, swelling and redness in his big toe
92. A patient who presents with a unilateral, throbbing and severe headache which was preceded by visual disturbances

Questions 93 - 97

Questions 93 to 97 concern the provision of promotive health services to children.

93. According to the Extended Programme of Immunisation in South Africa when should the tetanus and diphtheria (Td) vaccines be administered?

- (a) 6 weeks and 9 months
 - (b) 14 weeks and 6/9 months
 - (c) 6/9 months and 12/18 months
 - (d) 6 years and 12 years
94. How is the rotavirus vaccine administered to a child?
- (a) Subcutaneous injection on the lateral aspect of the thigh
 - (b) Subcutaneous injection on the upper arm
 - (c) Intramuscularly into the deltoid muscle of the upper arm
 - (d) Orally on the inner cheek
95. All children less than five years of age with measles should be given:
- (a) Bedrest
 - (b) Low dose aspirin to treat the fever
 - (c) Oral vitamin A, 200 000 units as a single dose
 - (d) Pyridoxine, 0.4 mg/day
96. The following advice should be given to the mother of a child who has chickenpox:
- (a) Isolate the child from all pregnant women until all lesions have crusted
 - (b) Encourage the child to remove the crusts from lesions since it promotes healing
 - (c) Treat the itch with mepyramine maleate cream
 - (d) Use a low dose aspirin to treat the fever
97. Where a pharmacist provides baby and child health services, the pharmacist must:
- (a) Not stock a range of formula milk
 - (b) Give advice on the use of medicines in association with breastfeeding
 - (c) Actively encourage all mothers to breastfeed
 - (d) Have all symptoms in babies under two years referred to him/her for advice

Questions 98 - 106

Questions 98 to 106 relate to the following scenario.

Mr Puff, a 42-year-old hypertensive male has heard that smoking is a risk factor for cardio-vascular disease. He has therefore come into the pharmacy to seek your advice on smoking cessation.

98. Which pharmacological intervention has been demonstrated to be MOST effective in smoking cessation?
- (a) Nicotine gum
 - (b) Disulfiram
 - (c) Varenicline (Champix®)
 - (d) Amitriptyline
99. With respect to smoking the following statements are true EXCEPT:

- (a) About a third of all male deaths over the age of 35 in South Africa can be attributed to tobacco use
 - (b) Maternal smoking is associated with intra-uterine growth retardation and still birth
 - (c) Smokers have approximately double the risk of developing TB and of dying from TB than non-smokers
 - (d) The benefits of smoking cessation are only experienced 6 months after quitting
100. The following is a non-modifiable risk factor for cardiac vascular disease:
- (a) Waist circumference
 - (b) Blood pressure
 - (c) Family history
 - (d) Blood glucose
101. You offer to do a cardiovascular disease risk assessment for Mr Puff, however, it is not of value if Mr Puff has:
- (a) Diabetes
 - (b) Hypertension
 - (c) Suffered a myocardial infarction
 - (d) Cancer
102. Blood pressure of hypertensive patients such as Mr Puff should be regularly monitored. What would Mr Puff's systolic blood pressure target be?
- (a) Between 70 and 90 mmHg
 - (b) 120 mmHg
 - (c) Between 120 and 140 mmHg
 - (d) Between 130 and 140 mmHg
103. If you performed a blood pressure test for Mr Puff it would NOT be necessary:
- (a) To obtain written and signed informed consent to conduct the test
 - (b) To conduct the test in a private consultation area
 - (c) To provide the results to Mr Puff in writing
 - (d) Counsel Mr Puff regarding the test results
104. Which cadres of pharmacy personnel can assist in performing the technical skill of a blood pressure measurement?
- (a) Pharmacists assistant (learner basic)
 - (b) Pharmacists assistant (post basic)
 - (c) Pharmacists assistant (learner post-basic)
 - (d) Pharmacist intern
105. When assessing Mr Puff's blood pressure, the following rules relating to code of conduct should be upheld by the pharmacist:
- (a) Publicity for services
 - (b) Confidentiality
 - (c) Dual registration
 - (d) Control over medicines

106. When referring Mr Puff to a medical practitioner for follow up after higher than normal blood pressure results have been observed, the following statement is TRUE:
- (a) The results can be given telephonically to the receptionist at the Dr's rooms
 - (b) The results must be recorded and kept in the pharmacy so that the pharmacist can find them when the medical practitioner calls
 - (c) The results must be written down and given to the patient as confirmation of referral and for the information of the medical practitioner
 - (d) If the results are high, the pharmacist must not provide any advice to the patient and send them directly to the medical practitioner

Questions 107 - 110

Use the following scenario to answer questions 107 to 110.

Mary is an intern pharmacist working in a corporate community pharmacy. The responsible pharmacist, overseeing Mary's internship, seems to be having a bad day. A customer comes up to the counter to pick up their medication, but their medical aid is refusing to pay with the rejection being "early refill". The customer is getting angry because they say that they need this medication today. As Mary tries to explain to the patient about the problem, the pharmacist gets involved and loudly begins to shout at the patient. The pharmacist says some rude things to the disgruntled patient and then sends them out of the store.

107. With whom does Mary enter into a training contract with when she registers as an intern?
- (a) The South African Pharmacy Council
 - (b) The employer
 - (c) The tutor
 - (d) A training contract is not necessary
108. Under what conditions can the responsible pharmacist in this scenario delegate the training of Mary to another pharmacist?
- (a) When they are too busy with management tasks
 - (b) When there is at least one pharmacist per intern working in the pharmacy
 - (c) When the responsible pharmacist resigns
 - (d) When the pharmacy closes down
109. Which of the following statements is TRUE regarding the scope of practice of a pharmacy intern?
- (a) They have the scope of practice of a pharmacist's assistant (learner post-basic), under the supervision of a registered pharmacist
 - (b) They have the scope of practice of a qualified pharmacist's assistant (post-basic), under the supervision of a registered pharmacist
 - (c) They have the scope of practice of a pharmacy technician, under the supervision of a registered pharmacist

- (d) They have the scope of practice of a pharmacist, under the supervision of a registered pharmacist

110. How do you think Mary should handle the situation in the scenario?

- (a) Mary should ask to have her lunch break so that she can recover from her anxiety over witnessing the pharmacist's outburst
- (b) The incident should be reported to the regional manager, especially if Mary does not feel comfortable confronting the responsible pharmacist herself
- (c) Wait for the customer to complain to the store management and then Mary should step in as a witness
- (d) Walk into the back of the pharmacy avoiding the responsible pharmacist. She should act as though nothing happened

Questions 111- 118

Questions 111 - 118 are based on the following advertisement:

PHARMACIST: PHARMACEUTICAL SERVICES GRADE 1	
Job	<p>Institution: Pearson Children's Hospital, Wonderboom</p> <p>Requirements</p> <ul style="list-style-type: none"> • Basic qualification accredited with the South African Pharmacy Council (SAPC) that allows registration with the SAPC as a Pharmacist. • Registration with the SAPC as a Pharmacist. • A minimum of 3 years appropriate experience after registration as a Pharmacist with the SAPC. <p>Competencies (knowledge and skills):</p> <ul style="list-style-type: none"> • In-depth knowledge of legislation, regulations, policies and procedures • Strong leadership skills pertaining to general management • Exceptional interpersonal skills • In depth practical knowledge of relevant finance and supply chain processes. • Knowledge and experience of human resource management. <p>Duties (key result areas/outputs):</p> <ul style="list-style-type: none"> • Provide leadership to the pharmacy staff • Strategic planning of the pharmacy • Management of the human resources and delegation of tasks to attain the business objectives • Ensure complete stock supply ensuring the promotion of rational prescriptions, compliance with internal policies and adherence to National Core Standards/legislation. • Development and implementation of a quality improvement plan • Monitor and evaluate the service to ensure quality • Logistical and risk management • Financial Management: principal responsibility for the pharmacy budget, and purchasing processes and activities

**Applications
To**

The Chief Executive Officer
(Attention Mr P Petersen)

111. The competencies described in the advertisement would form part of the:
- (a) Job specification
 - (b) Job description
 - (c) Job instructions
 - (d) Job induction
112. Strategic planning in the pharmacy would include:
- (a) The development of an operational plan
 - (b) The setting of daily goals
 - (c) Performing the management functions of planning and controlling
 - (d) Creating a vision of the future for the pharmacy
113. Financial management is the efficient management of all aspects of the financial function, including budgeting. Budgeting involves:
- (a) Controlling the expenditure of money within the pharmacy
 - (b) Allocating the pharmacy's resources to specific activities in the pharmacy
 - (c) Reducing the cash flow of the pharmacy
 - (d) Accounting for the use of all resources within the pharmacy
114. The goal of risk management in the pharmacy is:
- (a) Correcting dispensing errors
 - (b) Avoiding legal action being taken against the pharmacy
 - (c) Safer practice and enhanced patient care
 - (d) Limiting the necessity for professional judgement decisions
115. The Quality Improvement Plan does NOT normally include:
- (a) A statement of the quality standards for services supplied by the pharmacy
 - (b) A statement of the pharmacy's operational objectives
 - (c) A description of how patient feedback will be obtained for the services provided
 - (d) A description of how evidence supporting the achievement of the quality standards will be obtained and recorded
116. Six months after appointment of a successful applicant and implementation of a Quality Improvement Plan, the appointed pharmacist is able to identify that the average time that the staff who are responsible for dispensing medicines spend with patients is 78 seconds. Which of the following statements is TRUE?
- (a) This is an example of a patient care indicator
 - (b) This is an example of a prescribing indicator
 - (c) Staff are spending too much time with patients

- (d) Staff are spending too little time on the dispensing process
117. A new pharmacy is opening at a local shopping mall. Who needs to approve the trading title of the pharmacy?
- (a) Director General of the National Department of Health.
 - (b) The South African Pharmacy Council
 - (c) Minister of Health
 - (d) The board of SAHPRA
118. A pharmacist may levy a fee for services rendered. For which of the following services may a Pharmacist NOT levy a fee?
- (a) Performing a blood pressure measurement
 - (b) Performing a blood glucose test
 - (c) Performing an electrocardiogram
 - (d) Performing an HIV test

Questions 119 - 120

Use the case scenario below to answer questions 119 - 120

John Ndhlovu, a pharmacy manager, reads in a management journal that parents of young children have a high spending power. Therefore, John decides to discount all baby products in the pharmacy in order to attract a younger clientele.

119. What type of pricing strategy has John adopted?
- (a) Bait pricing
 - (b) Skim pricing
 - (c) Market-penetration pricing
 - (d) Leader pricing
120. The combination that best describes the marketing mix strategy that John has used is:
- (a) Price and product
 - (b) Price and place
 - (c) Price and promotion
 - (d) Price, product, place and promotion

TOTAL MARKS:

120