UNIVERSITY OF JOHANNESBURG

PROGRAM	: MASTER OF PUBLIC HEALTH
SUBJECT	: HEALTH SYSTEMS, FUNDING MODULES AND HEALTH ECONOMICS
CODE	: HSF01X2
DATE	: FINAL EXAMINATION
	04 JUNE 2018
DURATION	: 3 HOURS
WEIGHT	: 50: 50
TOTAL MARKS	: 150

EXAMINER	: Mr G Ndlovu
MODERATOR	: Mrs Martha Chadyiwa
NUMBER OF PAGES	: Nine (9) pages

INSTRUCTIONS TO CANDIDATES:

1. You are expected to answer **all questions.**
2. The aim is to check your ability to express objective knowledge with application and precision.
3. Read your questions carefully, you will be penalized if your answers are not properly structured.
4. You can start with any question, but do not divide the sub-questions of the same question.
5. Please write neatly.

GOOD LUCK

Question 1:

a. Define what are health care markets and healthcare marketing? (4 marks)

b. Explain why healthcare markets fail? (4 marks)

c. Discuss the role of government in addressing failures in health care markets. (4 marks)

d. Describe basic concepts of economic evaluation, focusing on the outcome measure, application and interpretation for the following methods:

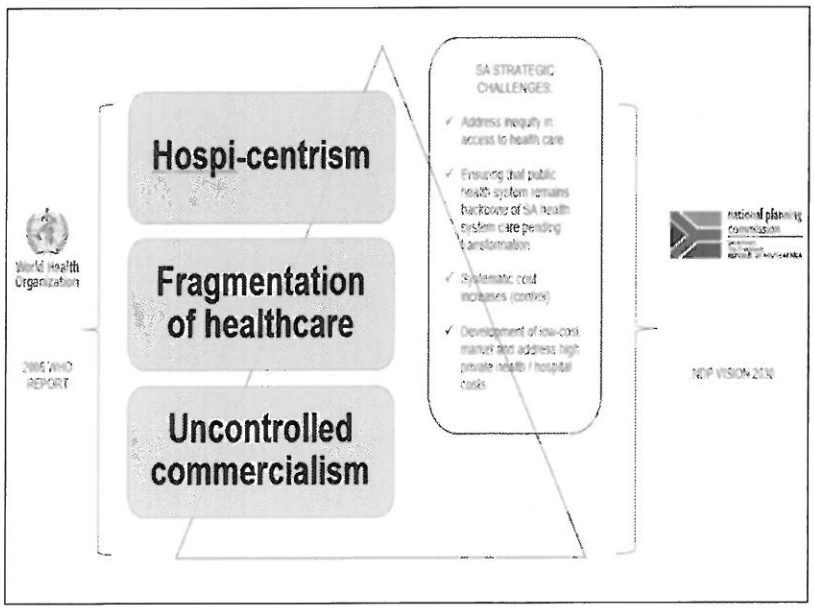
- Cost Minimisation Analysis. (1 mark)
- Cost-Effectiveness Analysis. (1 mark)
- Cost-Utility Analysis. (1 mark)
- Cost-Benefit Analysis. (1 mark)

e. Differentiate between QALYs and DALYs. (4 marks)

(20 Marks)

Question 2:

Refer to the diagram below and answer the following questions:

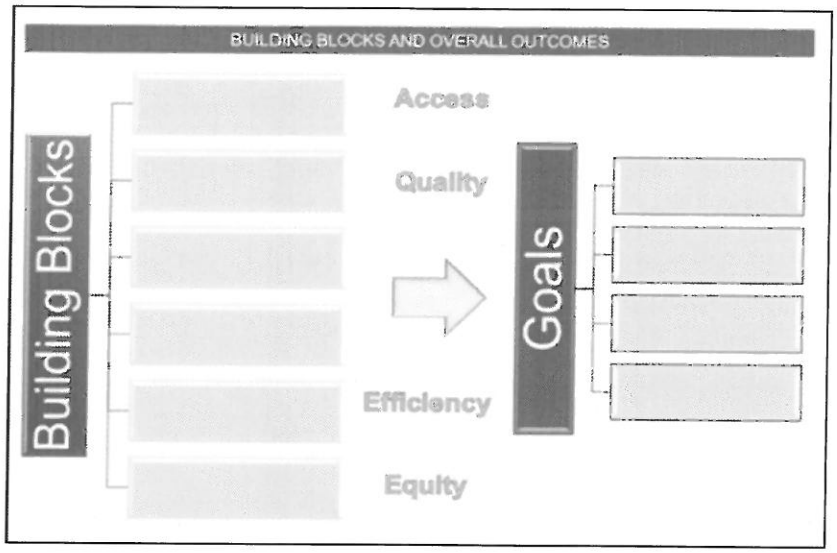


a. Identify and describe each of the problems with the current global health system? (3 Marks)

b. Please describe the strategic pathway, and regulatory documents that links the World Health Organisation to the National Planning Commission. (4 Marks)

c. What are the three dimensions of health care, please describe and provide examples. (3 Marks)

d. Please refer to the diagram below and answer the following questions:



- Please list and describe the building blocks per the diagram above. (6 Marks)
- Please list and describe the goals per the diagram above. (4 Marks)

(20 Marks)

Question 3:

a. Please describe and discuss with examples the control knobs (policy Levers for health). (10 Marks)

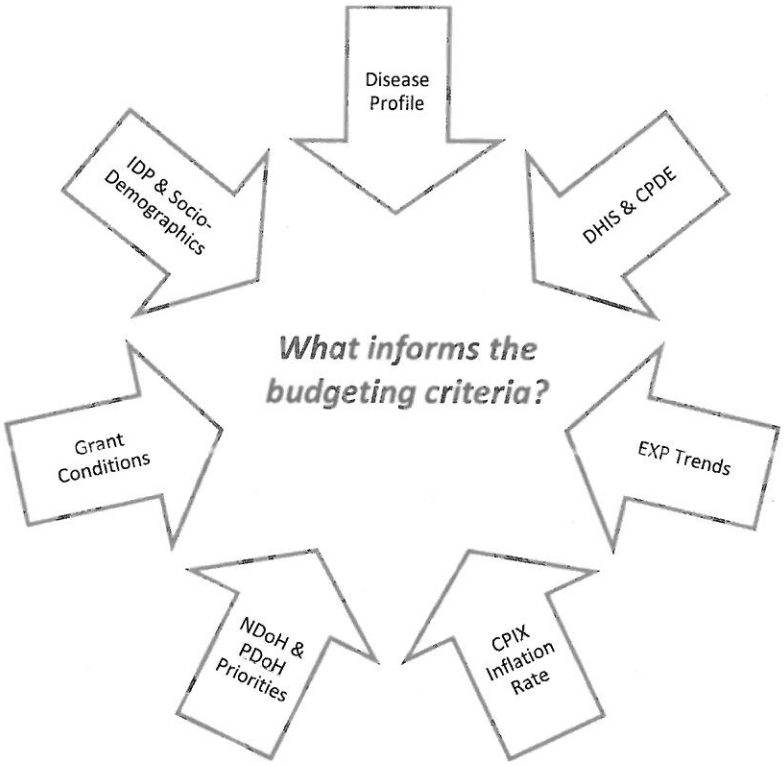
b. Please describe the attributes and differences of Social Health Insurance / Private Health Insurance / Tax Based Insurance / Community Based Insurance. (8 Marks)

c. What are SDGs and which SDG relates directly to the Health Sector? (2 Marks)

(20 Marks)

Question 4:

Please refer to the diagram below and answer the following questions:

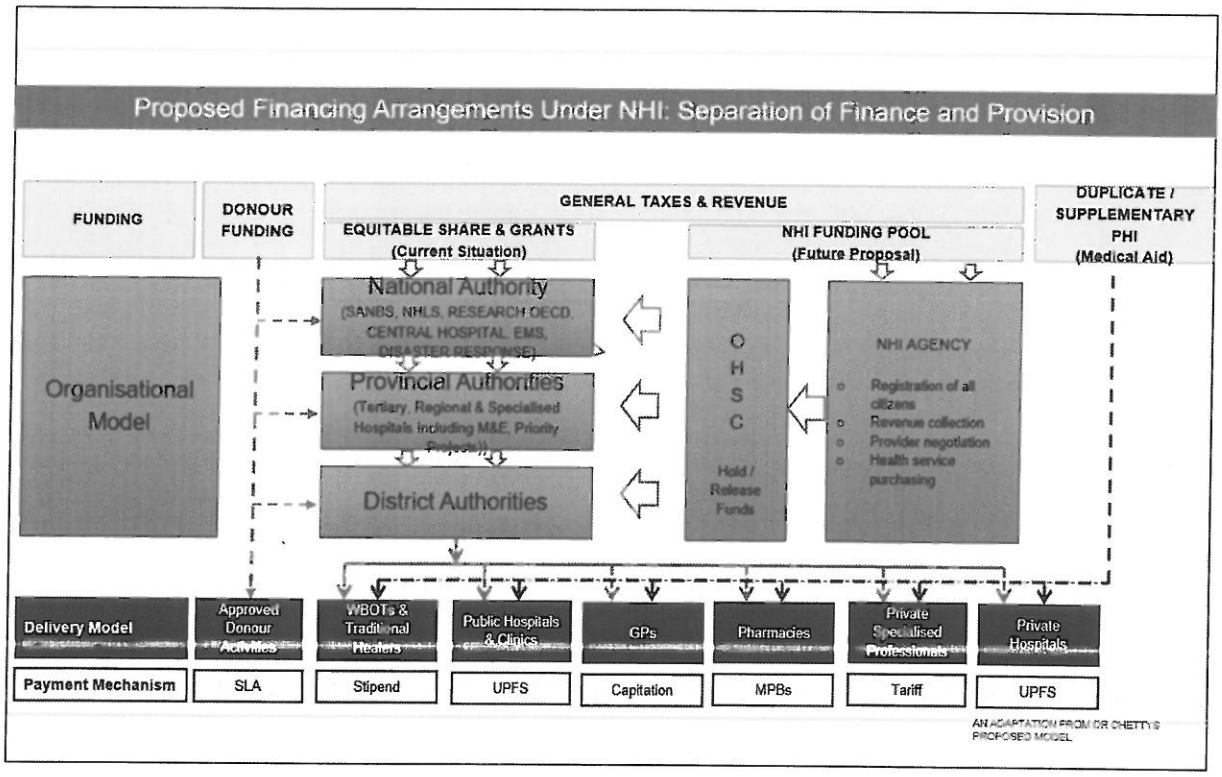


a) Please describe how each criteria informs the budget cycle and provide an example. (14 Marks)

b) Please describe and explain the following payment options for doctors:
   - Fee for Service. (1 Mark)
   - Salary. (1 Mark)
   - Session. (1 Mark)
   - Capitation. (1 Mark)

c) Please describe and explain the following payment options for hospitals:
   - DRGs. (1 Mark)
   - CPDE. (1 Mark)

d) Please refer to the diagram below and answer the following questions:



a. Identify and describe each of the payment mechanisms as per the diagram above.

(14 Marks)

b. Please define what does NHI mean, which legislation regulates it and describe it?

(4 Marks)

c. What is the OHSC and what are its three main functionaries? (6 Marks)

d. What is the Quadruple Burden of Disease? (2 Marks)

e. What is the "PFMA"? (2 Marks)

f. What is the "DORA 2018"? (2 Marks)

g. Differentiate between Equitable Share and Conditional Grants. (2 Marks)

h. Differentiate between Donour Funding, General Taxes Revenue, NHI Fund Pooling and Duplicate Supplementary Private Health Insurance (8 Marks)

(40 Marks)

Question 5:

You have been appointed as the District Health Economist in District X at the Limpopo Department of Health and your main responsibility is District Health Planning, you have been provided the following information:

- **Limpopo Department of Health Annual Performance Extract for 2017/18**

The Province of Limpopo northernmost province of South Africa and shares borders with the provinces of Gauteng, Mpumalanga and North West. It also shares borders with the Republics of Mozambique in the east, Zimbabwe in the north and Botswana in the west. The province covers a land area of 125 754 km2 with a population of 5.8 million people (Stats SA, 2016 mid-year population estimates). The population of Limpopo Province increased from 5.7 million in 2015 to 5.8 million in 2016. Limpopo Province is the fifth most populated province in the country after Gauteng, KwaZulu-Natal, Eastern Cape, and Western Cape respectively (Stats SA, 2016).

Migration is an important demographic process which shapes the age structure and distribution of the provincial population. According to Stats SA 2016 Mid-year population estimates, Limpopo Province is projected to experience an out-migration of nearly 305 030 between 2011 and 2016.

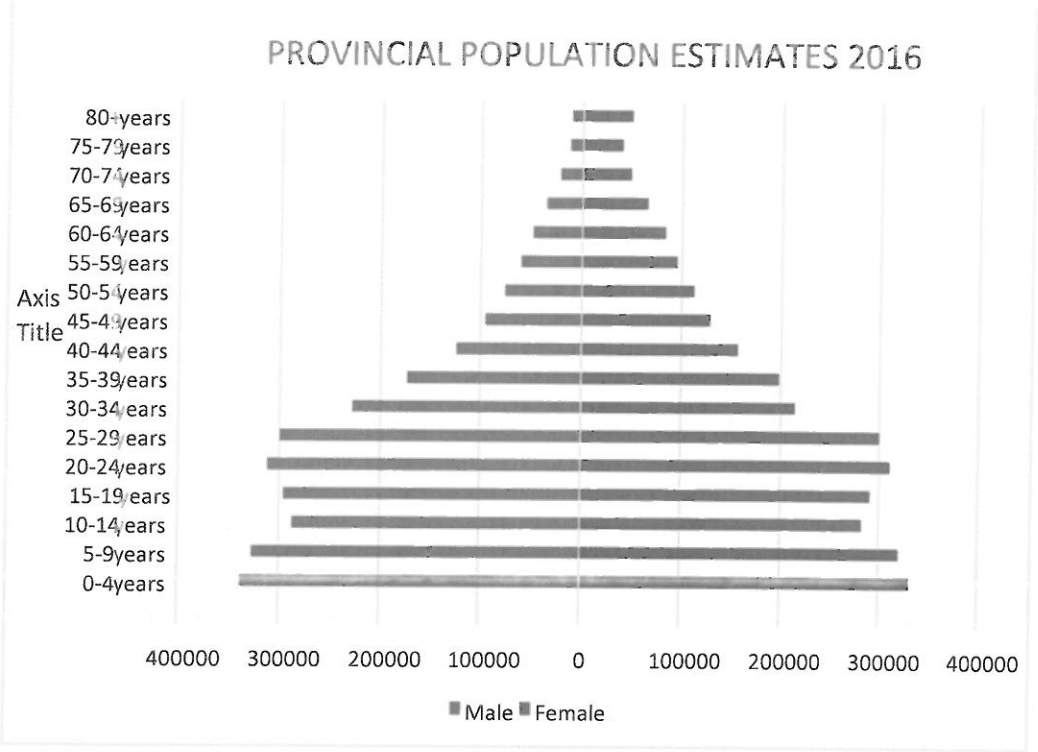
Table A1 provides the age and sex distribution of the population while Figure 1 depicts the age and sex structure (Stats SA Mid-year Population Estimates, 2015).

Table A1. Population of Limpopo Province by age and sex, 2016

Age	Male	Female	Total
0-4 years	338 759	330 784	669 542
5-9 years	327 047	320 199	647 246
10-14 years	286 627	282 543	569 169
15-19 years	295 665	290 949	586 614
20-24 years	311 825	310 968	622 794
25-29 years	299 482	300 108	599 590
30-34 years	227 774	214 535	469 309
35-39 years	174 035	198 350	372 384
40-44 years	124 120	156 811	280 931
45-49 years	95 357	128 840	224 197
50-54 years	75 763	112 738	188 501
55-59 years	60 379	95 507	155 886
60-64 years	48 797	83 887	132 684
65-69 years	35 404	65 654	101 058
70-74 years	22 097	48 580	70 678
75-79 years	12 806	39 818	52 624
80+ years	11 113	49 622	60 735
Total	2 747 049	3 056 893	5 803 941

Source: Stats SA Mid-year Population Estimates, 2016

Figure 1. Age – sex structure for Limpopo Province, 2016



Source: Stats SA Mid-year Population Estimates, 2016

Figure 1 is wider at the bottom, indicating that the population of Limpopo Province is youthful with 33,2% (1.9 million) being children under the age of 15 years. Economically active population (persons aged 15-64 years) constitute 61.6% or (3.5 million). The population of persons aged 60 years or older is increasing over time, contributing to 7.3% of the province's population. The Pyramid shows that there are significantly less males than women aged 80+ years in Limpopo Province. Females constitute more than half of the population in Limpopo Province, estimated at 52.8 % (3. 02 million).

1.5.2 Socio–Economic Profile

Approximately 80% of the population in Limpopo Province is rural based. This situation impacts on the population's capacity to acquire education, in particular, tertiary education which influences the potential for gainful employment in the formal economic sector. The census 2011 results show that Limpopo Province has the highest proportion of people aged 20 years and older with no schooling (17.3%) compared to other provinces. The results also show that persons aged 20 years and older, who passed Grade 12 (Matric) in Limpopo Province constituted 22.7 % - a figure that is lower than 28.9% recorded for SA.

The rate of unemployment plays a key role in depicting the employment status of the labour force in SA and, to a fair extent, the functioning of the economy at large. Stats SA conducts the Quarterly Labour Force Survey (QLFS) to track employment and unemployment patterns (labour market activities) of individuals aged 15 -64 years who live in SA quarterly. Results of the 2015 third Quarter (QLFR) put the national unemployment rate at 25.5%. From a

provincial perspective, the official unemployment rate increased by 2.9 percentage points from the first quarter to third quarter of 2015 (15.9% to 18.8%).

Furthermore, the Poverty Headcount using Community Survey 2016 data has shown that Limpopo Province is having the second largest poverty headcount of all provinces after Eastern Cape.

Table A2. Household indicators

Census Year	Headcount (H)	Intensity (I)
2011	10.1%	41.6%
2016	11.5%	42.3%

Source: Stats SA-Community Survey 2016

Limpopo Province poverty headcount increased from 10.1% in 2011 to 11.5% in 2016. The intensity of poverty has increased from 41.6% in 2011 to 42.3 in 2016. Sekhukhune (13.6%), District X (13.1%) and Vhembe district (12.8%) are the mainly affected in terms of poverty headcount as compared to Waterberg (9.0%) and Capricorn districts (8.5%). These demonstrates the acuteness of poverty the province is experiencing in particular at the three districts (Sekhukhune, Mopani and Vhembe). The hardly hit municipalities are the Greater Tubatse (27.7%), Fetakgomo (24.5%) and Makhuduthamaga (24.2%) all in Sekhukhune District. These increased poverty levels attributes to performance of indicators such as incidences of severe acute malnutrition (SAM), diarrhoea, prevalence of HIV and AIDS etc. Furthermore, these multi-dimensional factors of poverty further constrain the resources of the department in delivering services. Most importantly, these demographic changes impacts the financial resources allocated to the Limpopo Department of Health.

- **Internal Audit Findings**

Internal Audit Review 2016 / 2017 (Findings)	
Functionary	**Problem**
1. Infrastructure	- Poor water and toilet facilities
	- No waiting area
	- No signage
	- No office space
	- No servicing or maintenance of equipment
2. HR	- No segregation of duties
	- Officers not paid overtime
	- Staff establishment unclear
	- Shortage of cleaning personnel
	- Poorly trained staff
	- No work procedures
3. ICT	- No phones, faxes
	- No record or information management system
	- Client information not computerized

	- No reliable data-base (paper records)
4. Procurement	- No consumables e.g. stationery, cleaning material
5. Service Delivery & Quality Assurance	- No service standards and protocols
	- Clients not informed of the bucket of services
	- No confidentiality
	- Officers not identifiable
	- Service standards not stipulated
	- No guidelines
	- No help-desk for clients
	- No Service Board
	- No que marshals or hosts
	- No process flows
6. Risk Management	- No safe for the fire-arm
	- Unlicensed drivers
	- No vehicle maintenance
	- Possible infections due to over-crowding, unhygienic toilets, etc
	- Unclean premises
7. Leadership and governance	- No staff meetings (coordination of activities)
	- No reporting by centres
	- No visible management at all levels
8. Communication	- Poor communication between centres, district and head office
	- Poor communication between clients and officials
	- Non display of promotional materials
	- Communication between officials and their supervisors
	- No notices of distribution dates
9. M & E	- No proper planning of activities
	i. No PMDS

Question 6:

a. Using the information provided, you are requested to draft a one year district health plan for District X for the 2018/19 financial year, you will be expected to incorporate your learnings on the Control Knobs and Integrated Health System Framework. Please use the template example below:

Functionary	Problem / Challenge	Objective	Activity	Indicator	Annual Target	Control Knob	Intermediate Outcome	Ultimate Goal
Example Human Resources	Unapproved organogram	Approve organogram	-Engage all stakeholders for a final review of the organogram - Obtain MEC Approval - Obtain DPSA Approval	DPSA Approved organogram	1 Approved organogram	Regulation & Persuasion	Equity	Health Status & Cost Control

Marks will be allocated as follows:

No.	Presentation Aspect	Description	% Score
1.	Content	Ability to demonstrate analytical and logical deductibility	20%
2.	Critical and creative thinking and application skills	Ability to demonstrate critical and creative thinking skills with a high degree of effectiveness	15%
3.	Communication of information and ideas	Clarity of expression is communiacted to a very high degree	10%
4.	Material	Balanced use of materials and information provided	5%
		Total	**50%**

(50 Marks)

Total Marks 150