



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014
SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE
HSU 100: BASIC LIFE SUPPORT AND EMERGENCY CARE

DATE: Wednesday, 2nd April 2014

TIME: 11.00 a.m. – 1.00 p.m.

First Aid Multiple Choice questions.

INSTRUCTIONS:

1. Please do not write your answers on the test paper.
2. Please circle the best answer on the answer sheet provided
3. There is only one correct answer.

1. **What is first aid?**

- (a) Completing a primary survey
- (b) The first help given to the victim of an accident
- (c) Assessing a victim's vital organs
- (d) Treating a victim for shock

2. **What treatment does a victim who's life threatening condition is "not breathing" need?**

- (a) The Heimlich Maneuver, two rescue breaths and CPR
- (b) Start CPR immediately
- (c) Twelve to fifteen rescue breaths per minute and correct CPR
- (d) You should follow the steps for rescue breathing

3. **The best treatment for all heart attack victims is immediate CPR.**

- (a) True
- (b) False

The victim of a poisonous snake bite is not at risk for getting rabies.

- (a) True
- (b) False

4. **The accepted first aid treatment for a thigh born fracture is:**
- (a) Place a short padded splint on each side of the leg
 - (b) This type of fracture is best handled by a traction splint applied by those with special training
 - (c) Move the victim before properly applying a leg splint
 - (d) Bind both legs with two long splints using two cravats, one above and one below the break
5. **The accepted treatment for epistaxis is:**
- (a) Use direct pressure, elevation and pressure points to control the bleeding
 - (b) Tilt the head back and tightly squeeze the nostrils
 - (c) Have the victim lean forward. Apply gentle pressure on the nostril. Apply cold towels.
 - (d) Lay the victim on his back and treat for shock. Apply heat if available.
6. **After you have surveyed an accident scene and provided for your own safety you should:**
- (a) Take charge, remain calm and act with confidence to the level of your training
 - (b) Provide primary treatment for shock
 - (c) Call 911 or your local emergency number
 - (d) Provide immediate treatment for severe bleeding
7. **To treat a burn you should:**
- (a) Apply a good quality burn cream or ointment
 - (b) Clean the area thoroughly with hot soapy water
 - (c) Apply a constricting band between the burn and the heart
 - (d) Apply cool running water until there is little or no remaining pain
8. **A victim that has come in skin contact with poisonous plant should:**
- (a) Wait at least 20 minutes before washing the effected area with hot water and soap
 - (b) Rinse the effected area immediately with soap and water
 - (c) Continue to wear clothes that have come in contact with the plant
 - (d) Immediately scratch and rub the effected area to provide long-term relief from the itching

9. Which of the following techniques is not suitable for moving an unconscious victim?
- (a) Improvised stretcher
 - (b) Four-handed seat carry
 - (c) Two person carry
 - (d) Blanket drag
10. Which of the following correctly describes the CPR technique for an adult:
- (a) 30 compressions to 2 breaths cycles
 - (b) 10 compressions to 2 breaths cycles
 - (c) 30 compressions to 1 breath cycles
 - (d) 39 compressions to 5 breaths cycles
11. What is the best procedure for treating a known poisonous snake bite?
- (a) Capture the snake. Place it in an ice chest and take the snake and victim to a hospital
 - (b) Place a constricting bandage 4 inches above the head of the snake to slow the spread of venom.
 - (c) Keep the victim calm, keep the bite location lower than the heart, get medical help immediately
 - (d) Treat the victim for shock and continue the planned activity
12. Severe bleeding is an emergency. Which one of the following statements is TRUE?
- (a) Bleeding can seldom be stopped with direct pressure.
 - (b) A tourniquet is almost always required to control serious bleeding.
 - (c) Should the first sterile pad used become blood soaked, immediately remove it and apply another
 - (d) Try to avoid direct contact with the victim's blood by using latex gloves or another barrier
13. Insect stingers left behind can be full of un-injected ____, squeezing injects it into victim and causing more harm.
- (a) Honey
 - (b) Poison
 - (c) Anti-venom
 - (d) Insect blood

14. Snake bite treatment includes removal of bracelets, watches, and rings in case the victims body begins to:
- (a) Swell
 - (b) Convulse or spasm
 - (c) Dehydrate
 - (d) Sweat
15. You have a victim who is bleeding profusely from the forearm. What do you do first?
- (a) Wipe the area clean with a sterile bandage
 - (b) Put on rubber/latex gloves
 - (c) Cover the area with a sterile bandage
 - (d) Apply pressure on the groin artery
16. The rate of chest compressions in an infant is at least:
- (a) 90 times per minute
 - (b) 100 times per minute
 - (c) 80 times per minute
 - (d) 60 times per minute
 - (e) 90 times per minute
17. A child has been burned by scalding hot water. What do you do next?
- (a) Put aloe vera lotion on it until it cools off
 - (b) Put ice on it to reduce the heat
 - (c) Wrap it in clean gauze bandages to keep it clean from infections
 - (d) Put it under cool running water to reduce the heat in the area
18. A person is allergic to peanut butter and is going into anaphylactic shock (swelling of the lymph nodes, heavy sweating, and rapid breathing). What do you do next?
- (a) Have them sit with their head between their knees and have them breathe deeply
 - (b) Look for the epi-pen and assist to give them a shot
 - (c) Give them some water to cool their throat
 - (d) Give them some aspirin immediately

19. **People who are allergic to bee stings should**
- (a) Carry a treatment kit prescribed by their physician
 - (b) Teach their companions about their condition and their treatment kit
 - (c) Become a bee keeper
 - (d) Both A and B
20. **You should call 9-1-1 or local emergency number if the person:**
- (a) is vomiting blood
 - (b) is pregnant with a seizure
 - (c) has a 6 minute seizure
 - (d) all of the above
21. **As you are in a restaurant and someone near you is choking and cannot breathe, what should you do?**
- (a) Tell him to lie down and then perform CPR
 - (b) Stand behind him and give him abdominal thrusts by placing your hands just above his belly button and thrusting inward and upward
 - (c) Yell for a doctor or a nurse
 - (d) Give him water to drink
22. **What is the basic position for treating shock?**
- (a) Position victims head lower than the feet.
 - (b) Lay victim on his/her left side.
 - (c) Stand the victim upright.
 - (d) Lay victim on his/her right side.
23. **Which of the following refers to the failure of the circulatory system to maintain enough oxygen-rich blood flowing to the vital organs of the body?**
- (a) Internal bleeding.
 - (b) Choking
 - (c) A concussion.
 - (d) Shock.

24. **What injury is caused when a bone is forced out of its joint?**
- (a) Closed fracture
 - (b) Open fracture
 - (c) Dislocation
 - (d) Sprain
25. **You have been providing CPR to a 55-year-old man in cardiac arrest. EMT (Emergency Medical Team) arrives with AED (Automated external defibrillator). What action should be taken next?**
- (a) Stop CPR and wait until the AED is set up and attached.
 - (b) Finish 5 cycles of CPR and then set up the AED and attach it
 - (c) Continue with CPR while the AED is set up and attached
 - (d) Shock the victim immediately the AED arrives
26. **The pain of angina pectoris is primarily produced by**
- (a) Coronary vasoconstriction.
 - (b) Movement of thromboemboli.
 - (c) Myocardial ischemia.
 - (d) The presence of atheroma.
27. **During CPR on an adult the chest is compressed**
- (a) at least 2 inches.
 - (b) $\frac{1}{3}$ to $\frac{1}{2}$ AP diameter
 - (c) $1\frac{1}{2}$ to 2 inches.
 - (d) $1\frac{1}{2}$ to $2\frac{1}{2}$ inches.
28. **What is the sequence of C-A-B in the basic life support (BLS)?**
- (a) Check response, activate EMS (Emergency Medical System). Check pulse, start CPR.
 - (b) Open the airway, start rescue breathing, check heart rhythm, provide shocks as indicated.
 - (c) Open the airway, assess breathing, give 2 breaths, check pulse, start CPR, defibrillate.
 - (d) Activate EMS, check breathing, give 2 rescue breaths, check pulse, start CPR.

29. To ensure the best possible chance for your patient to survive an arrest, the resuscitation team should ensure that:
- (a) Family members are not present during the resuscitation effort.
 - (b) Interruptions in CPR are minimized.
 - (c) Every attempt is made to check for signs of life.
 - (d) The team pauses frequently during CPR to reassess the patient.
30. What is the most common cause of airway obstruction in an unconscious victim:
- (a) Food getting stuck in the oesophagus.
 - (b) The tongue.
 - (c) People trying to swallow objects.
 - (d) Eating too fast and talking at the same time.
31. How do you open the airway of a suspected neck injury unconscious patient?
- (a) Head tilt-chin lift.
 - (b) Jaw thrust.
 - (c) You do not open the airway because it will damage the spinal cord.
 - (d) You ventilate the nose instead.
32. Immediately after delivering a shock you should have a team member.
- (a) Deliver another shock if the rhythm is still ventricular fibrillation.
 - (b) Assess the pulse.
 - (c) Resume CPR, beginning with chest compressions.
 - (d) Give appropriate drug indicated in the ACLS guidelines.
33. What do you do after doing 2 minutes of CPR when AED is attached?
- (a) Check for breathing and check the pulse.
 - (b) Analyze the rhythm.
 - (c) Check for breathing.
 - (d) Check that CPR is performed correctly.
34. What are the signs and symptoms of an unstable patient?
- (a) A patient who complains all of the time.
 - (b) A patient who demonstrates tachycardia, fever, and sweats.
 - (c) A patient who reports pain.
 - (d) A patient who reports chest pain, or shortness of breath, and/or has hypotension.

35. The most important determinant of the survival for patients in cardiac arrest is:
- (a) Endotracheal intubation
 - (b) Early defibrillation.
 - (c) Cardiac pacing
 - (d) Adrenaline injection
 - (e) Thrombolytic therapy
36. Prolonged resuscitation efforts may be indicated for patients who
- (a) Have a diagnosis of terminal cancer.
 - (b) Suffered a massive MI.
 - (c) Drowned in warm waters.
 - (d) Are hypothermic or overdosed on drugs.
37. Which of the following is not a sign of a stroke?
- (a) Trouble speaking or understanding.
 - (b) Loss of balance or coordination.
 - (c) Headache that gets better after treatment with pain medication.
 - (d) Sudden weakness or numbness.
38. Which of the following is not correct for child CPR
- (a) 100cpm (compressions per minute).
 - (b) Compression-ventilation ratio for 2 rescuers is 30:2
 - (c) Compression-ventilation ratio for 1 rescuer is 30:2
 - (d) Children often have respiratory difficulty, which leads to cardiac arrest and therefore need more frequent ventilations.
39. Which of the following is not correct for small child CPR
- (a) During initial assessment check airway first, if there is no breathing give 2 breaths
 - (b) Check pulse for 5 seconds
 - (c) If there is perfusing pulse, give rescue breaths every 3 seconds
 - (d) Each breath administration lasts 1 second.

40. **Key for effective CPR is:**
- (a) Pump hard and fast
 - (b) 100 cpm
 - (c) Allow chest to recoil
 - (d) Minimize interruptions of chest compressions
 - (e) All of the above
41. **For child CPR in unwitnessed arrest**
- (a) After assessing that child is unresponsive, call Emergency Medical Services (EMS).
 - (b) After assessing that child is unresponsive, shout for help but immediately start CPR for 1 cycle and then go and call EMS
 - (c) After assessing that child is unresponsive, get the defibrillator
 - (d) After assessing that child is unresponsive, shout for help but immediately start CPR for 5 cycles (2 min) and then go and call EMS.
42. **In a conscious adult with a complete or severe airway obstruction, the**
- (a) Victim is unable to speak
 - (b) Victim is responsive and can cough forcefully
 - (c) Victim should be encouraged to cough
 - (d) Victim has good air exchange
 - (e) All of the above
43. **In an unconscious 3 year-old child that has collapsed after choking what is the next thing you would do?**
- (a) Do abdominal thrusts (Heimlich manoeuvre)
 - (b) Do 5 back slaps followed by 5 quick chest thrust just below the nipple line
 - (c) Check inside the mouth to see if object can be seen and start CPR
 - (d) Continue rescue breathing and check for pulse every 2 minutes.
44. **What might happen if you touched the victim while the AED is delivering shock?**
- (a) You might move victim, which may cause the AED to reanalyze the victim's rhythms
 - (b) The AED could shock you while shocking the victim
 - (c) The AED might mistake your movement for the victim's pulse and not deliver a shock
 - (d) The AED will power off if you touch the victim while it is shocking

45. **When you perform CPR, for victim of sudden cardiac arrest?**
- (a) CPR decreases the need for coronary artery bypass
 - (b) CPR forces the heart in asystole to return to a normal heart rhythm
 - (c) CPR has no effect on survival
 - (d) Immediate CPR provides a flow of oxygen-rich blood to the heart and brains and "buys time" until defibrillation
46. **A 7-year-old boy is struck by a car in front of your house. You find him unresponsive and bleeding from a wound on his forehead. How should you open his airway?**
- (a) By tilting his head and lifting his chin
 - (b) Jaw thrust with in-line cervical spine immobilization
 - (c) By sweeping out his mouth and pulling forward on his tongue
 - (d) By not moving him at all because he might have a broken neck
47. **What is the compression to ventilation ratio with 2 rescuers for a near drowned child?**
- (a) 30:2
 - (b) 15:2
 - (c) 5:2
 - (d) Near drowned child does not need CPR
48. **You are alone and after attempting to do 5 back slaps and 5 chest thrusts on an infant with complete airway obstruction, the infant becomes unconscious, you should**
- (a) Check the mouth and when you see nothing do a blind sweep of the mouth
 - (b) Place the infant on flat surface and check the mouth for the object in the pharynx
 - (c) Give 2 ventilations
 - (d) Start CPR with compressions and continue to do 30 compressions to 2 ventilations
49. **What is the best way for a rescuer to know that a rescue breath for an infant victim is effective?**
- (a) The stomach rises visibly
 - (b) An infant ventilation bag is completely compressed
 - (c) The chest rises visibly
 - (d) The rescuer can hear an air leak around the mask

50. Which of the following actions is done first to restore oxygenation and ventilation to an unresponsive, breathless, near-drowning victim?
- (a) force water from the victim's lungs by performing the Heimlich maneuver
 - (b) force water from the victim's lungs by starting chest compressions
 - (c) stabilize cervical spine with c-collar and spine board, then start the C-A-Bs
 - (d) open the airway with a jaw-thrust maneuver, provide in-line cervical stabilization, start the ABCs.
51. Which of these lists CPR performance and AED operation in the correct sequence?
- (a) Send someone to call 911, attach AED electrode pads, open airway, turn on the AED, provide 2 breaths, check for a pulse
 - (b) Wait for the AED and barrier device to arrive, open airway, provide 2 breaths, check for a pulse, if no pulse attach AED electrode pads, follow AED prompts
 - (c) Send someone to call 911, open airway, provide 2 breaths, check for a pulse, if no pulse attach the AED, follow AED prompts
 - (d) Call for the AED, check for a pulse, if no pulse perform chest compressions, when the AED arrives attach electrode pads.
52. You are operating an AED in an attempted resuscitation of a man who collapsed in the airport. After delivery of 1 shock, what is the next thing you do?
- (a) Reanalyze the victim's rhythm
 - (b) Perform CPR until EMS personnel arrive
 - (c) Perform CPR for 2 minutes, then reanalyze the victim's rhythm
 - (d) Leave the AED attached and start transport to the nearest ED, stopping every 3 minutes for the AED to reanalyze
53. EMTs arrive at the side of a 55-year-old man in cardiac arrest. The first AED analysis registers "shock indicated". But before the shock can be delivered, the EMTs learn that the man has gone without any bystander CPR. What action should the EMTs take next?
- (a) Resume CPR, supplement with 100% O₂, continue until paramedics arrive
 - (b) Allow the AED to charge and shock
 - (c) Resume CPR, supplement with 100% O₂ for 3 minutes, reanalyze, shock if needed
 - (d) Resume CPR, contact medical control, request permission to stop resuscitation efforts

54. Which of the following actions is done first to restore oxygenation and ventilation to unresponsive, breathless, near drowning victim:-
- (a) Force water from the victim's lungs by performing the Heimlich maneuver.
 - (b) Force water from the victim's lungs by starting chest compressions.
 - (c) Stabilize cervical spine with c-collar and spine board, then start the C-A-Bs.
 - (d) Open the airway with a jaw thrust maneuver, provide in line cervical stabilization start the ABC
55. A colleague arrives to assist you in performing BLS. The correct ratio for two-rescuer BLS for an infant is:-
- (a) 15:2 compressions: respirations
 - (b) 5:1 ventilations : compressions
 - (c) 30:1 compressions: ventilations
 - (d) 15:2 ventilations : compressions
 - (e) 30:2 compressions: ventilations
56. If the patient is not in cardiac arrest and is conscious but appears to be choking, what should be your first action to relieve her airway obstruction?
- (a) Encourage her to cough
 - (b) Perform abdominal thrust
 - (c) Endotracheal intubation
 - (d) Administer high flow oxygen
 - (e) Administer back slap
57. A victim who can answer question. "Are you o.k.?"
- (a) Is unconscious
 - (b) Is breathing
 - (c) Has a pulse
 - (d) b and c
 - (e) a and c

58. While eating dinner, a friend suddenly starts to cough weakly and make high-pitched noises. After calling for help, you should;
- (a) Lower him to the floor and do a finger sweep
 - (b) Give abdominal thrusts
 - (c) Slap him on the back
 - (d) Open the airway
 - (e) Give two slow rescue breaths
59. Abdominal thrusts help a choking victim by:-
- (a) Forcing the air in the lungs out through the airway to push an object out
 - (b) Releasing gas in the stomach, which pushes an object out
 - (c) Sucking air in to push an object into the lungs
 - (d) All the above
 - (e) None of the above
60. Where should you position your hands when giving abdominal thrusts to a conscious adult?
- (a) On the center of the chest
 - (b) In the middle of the abdomen just above the navel
 - (c) Below the navel
 - (d) Anywhere on the abdomen
 - (e) None of the above
61. When you perform chest compressions on an adult, why is it important to keep your shoulders directly over your hands and your elbows locked?
- (a) So that you don't injure your elbow joints
 - (b) So that the proper wrist angle is maintained throughout the compressions
 - (c) So that the chest is compressed exactly one inch
 - (d) So that you use the weight of your upper body to compress the chest and don't tire out too quickly
 - (e) It does really not matter how you do the compressions

62. You work with an overweight 55 year-old dentist with no known history of heart disease. He begins to complain of sudden, severe, “crushing” pain under his breastbone, in the center of his chest. The pain has lasted more than 5 minutes. What problem should you think of right away, and what should you do?
- (a) Heartburn; tell him to take an antacid
 - (b) Angina; phone his personal physician
 - (c) Heart attack activates the local emergency system or drive him to the hospital
 - (d) Arrhythmia; drive him to an Emergency department
63. Healthcare providers are cautioned to look for “adequate” breathing when they open the airway and check for breathing in an unresponsive victim. What is the best explanation for the requirement that the healthcare provider look for more than just the presence or absence of breathing?
- (a) Healthcare providers often mistake effective breaths for absence of breaths and they start rescue breathing unnecessarily
 - (b) Most adult victims of cardiac arrest actually stop breathing before the cardiac arrest, and the respiratory arrest precipitates the cardiac arrest.
 - (c) Many victims of sudden cardiac arrest actually have a foreign body in the airway, which will require that you check and confirm that breathing is adequate
 - (d) Some victims may continue to demonstrate agonal or gasping breaths for several minutes after a cardiac arrest, but these breaths are too slow or too shallow and will not maintain oxygenation
64. You find an infant on the floor tangled in an electrical cord. After turning off the power, you remove the cord. What should you do next?
- (a) Check to see if the infant is conscious
 - (b) Call your local emergency number for help.
 - (c) Call the infant's parents
 - (d) Position the infant and give CPR
65. When giving rescue breaths to a child, how should you breathe into the victim?
- (a) Gently
 - (b) As fast as you can.
 - (c) As hard as you can
 - (d) a and c

66. **Where should you position your hands when giving abdominal thrust to a conscious child who is choking?**
- (a) On the middle of the abdomen, just above the navel
 - (b) On the notch where the ribs meet the breastbone.
 - (c) In the middle of the breastbone
 - (d) To the left or right of the navel
67. **What should you do for a conscious child who is choking and cannot speak, cough or breath?**
- (a) Give two slow breaths
 - (b) Do a finger sweep
 - (c) Lower the victim to the ground and give 5 abdominal thrusts
 - (d) Give abdominal thrusts
68. **When giving back slaps or chest thrusts to an infant, what is the correct position for the infant?**
- (a) It does not matter what the position the infant is in
 - (b) The head and chest should be at the same level
 - (c) The head should be lower than the chest
 - (d) The head should be higher than the chest
69. **You are providing rescue breathing for a child using a bag-mask device. What action will confirm that each of your rescue breaths is adequate?**
- (a) Determining the child's weight, calculating the tidal volume, and delivering that amount of air
 - (b) Observing the child's chest rise with each rescue breath
 - (c) Choosing the correct size bag-mask device, which will ensure delivery of adequate rescue breaths
 - (d) Delivering breaths quickly with high peak inspiratory pressures
70. **The first thing to do if you try to give the initial two breaths without success is to:-**
- (a) Reposition the airway and try the ventilations again
 - (b) Sweep out the victims mouth
 - (c) Give up to 5 abdominal thrusts
 - (d) Go on to check the pulse



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE

BBA 308: HUMAN RESOURCE MANAGEMENT II

DATE: Wednesday, 2nd April 2014

TIME: 11.00 a.m. – 1.00 p.m.

INSTRUCTIONS:

Answer question ONE and attempt any other TWO.

1. (a) Explain the benefits of performance appraisal to the following
 - (i) Employer perspective
 - (ii) Employee perspective (12 marks)
- (b) “As a HR Manager you have noticed a go-slow in employee performances and have noticed several signs of grievances”. Explain the various ways you can utilize to minimize the grievances as a way of increasing productivity. (9 marks)
- (c) Enumerate the various methods you can put in place to prevent accidents occurring at the work place. (6 marks)
- (d) Define the term “Employee Turnover” and explain briefly the methods of determining employee turnover. (3 marks)
2. (a) Define the term “Reward Management”. (3 marks)
- (b) Discuss the objectives of a reward system in an organization. (7 marks)
- (c) Enumerate the different types of employee rewards. (10 marks)
3. What are the implications of globalization for Human Resources Management? (20 marks)
4. What is meant by Job Evaluation and what is its purpose? (20 marks)



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UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ECONOMICS

EAE 201: ECONOMICS OF PUBLIC EXPENDITURE

DATE: WEDNESDAY 2ND APRIL 2014

TIME: 2.00 P.M. – 4.00 P.M.

INSTRUCTIONS

Answer Question ONE and any other TWO Questions

Question One

- a) Using relevant examples, differentiate between the following pair of terms (10 marks)
- i) Consumer Surplus and Producer Surplus
 - ii) Market failure and Government failure
 - iii) Unanimity rules and Majority voting rules
 - iv) Pure public rules and Impure public good
 - v) Direct benefit and Indirect benefit
- b) A community as Q members. The marginal benefit of each person from national security is $MB = 20 - 0.8X$ and the marginal cost $MC = 20 + 4X$
- i) What is the optimal level of national security if $Q = 5$ (2 marks)
 - ii) If all the members share the cost of national security equally, what is the net social welfare of each member? (5 marks)

- ii) Suppose now the community has two groups: Group 1 has 5 individuals whose $MB_1 = 12 - 0.8 X$ and Group 2 has 5 individuals whose $MB_2 = 20 - 0.8 X$. What is the socially optimal level of national security in this case?

(3 marks)

- c) Use relevant examples to describe five responses to correcting externalities.

(10 marks)

Question Two

- a) Suppose Kiambu County wishes to implement projects namely: dispensary, school and community center in different areas of the county. The county has three voters: Mburugu, Mutuku and Omwancha. The table below shows their benefits from each project. A minus sign indicates a net loss from the project.

Voter	Benefits to each voter			
	Mburugu	Mutuku	Omwancha	Benefits
Dispensary	400	-100	-110	190
School	-80	150	-60	160
Community center	-240	-120	800	440

- i) Explain what will happen if the projects are voted one at a time (3 marks)
- ii) Demonstrate that with vote trading all projects can be adopted (4 marks)
- iii) Explain the implication of the fact that vote trading (log rolling) can lead to the adoption of projects even in the case where all the projects above have a net loss (Costs exceed Benefits) (3 marks)

- b) Using relevant examples discuss any four public policy objectives. (10 marks)

Question Three

- a) Discuss the reasons for the growth of public expenditure in a developing country such as Kenya (10 marks)
- b) If cash flows for a project are as follows

Year	1	2	3	4	5
Benefits	10000	2500	4000	4000	5000

If the discount rate is 12%. Find

- i) The BCR and NBCR (8 marks)
- ii) Should the investor invest in the project? (2 marks)

Question Four

- a) Describe the set of marginal conditions necessary for optimal resource allocation (Use well labeled diagrams or relevant equations) (10 marks)
- b) Use relevant examples to illustrate any five principles of a good budget. (10 marks)

Question Five

- a) Describe any five forms of market failure (10 marks)
- b) Externalities can be classified as either negative or positive. With the help of well labeled diagrams demonstrate the consequences of each one of them. (10 marks)



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**SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
COMMERCE**

BAC 302: ADVANCED ACCOUNTING II

DATE: MONDAY 31ST MARCH 2014

TIME: 8.00 A.M. – 10.00 A.M.

INSTRUCTIONS: ANSWER ALL QUESTIONS.

1. Maendeleo Ltd includes with its financial statements each year a statement of value added.

	KSh.	KSh.
Revenue from sales		240 520
Bought in materials & services		<u>164 920</u>
Value added by the company		<u>75 600</u>
Appropriated as:		
To the employees		
Salaries	16 400	
Deductions for Income tax and National Insurance	(3 420)	
	12 980	
Pension schemes	2 820	
Employees' profit sharing schemes	550	
Welfare and staff amenities	<u>850</u>	17 200
To the Government		
Value added tax	30 680	
Corporation tax	<u>1 220</u>	31 900
To providers of capital		
Interest on loan	3 800	
Income tax deducted	1 840	
Interest on bank overdraft	1 520	
Dividends to shareholders of the company	<u>1 700</u>	8 860
The replacement of assets and the expansion of the business		
Depreciation	5 640	
Retained profits	<u>12 000</u>	<u>17 640</u>
		75 600

Required:

- (i) Highlight the advantages of the value added statement.
- (ii) Construct an income statement from the information given.
- (iii) Calculate the operating profit for use in a statement of changes in financial position.

(15 marks)

2. Tujinjenge Retirement Benefit Scheme has provided you with the following extract of the trial balance for the year ended 31st October 2007.

	Shs '000	Shs '000'
Accumulated fund as at 1 st Nov. 2012		461 560
Accrued expenses		240
Administration expenses	2 840	
Cash and demand deposits	23 460	
Change in market value of investments	22 460	
Lump sum retirement benefits	4 820	
Contribution due in 30 days	4 940	
Normal contributions by : Employer		36 480
Employee		18 240
Transfers from other schemes		3 150
Individual transfers out to other schemes	1 860	
Investment income		47 400
Immovable property	132 320	
Government securities (long-term)	263 605	
Members' voluntary contributions		4 560
Pensions	7 640	
Equity investment: Quoted	87 835	
Unquoted	19 990	
Unpaid benefits	—	<u>320</u>
	<u>571 950</u>	<u>571 950</u>

Required

- a) Statement of changes in net assets for the year ended 31st October 2007. (8 marks)
- b) Statement of assets as at 31st October 2007. (7 marks)

3. (i) With reference to IAS 26 distinguish between defined contribution plans and defined benefits plans.
- (ii) The following information was extracted from the books of ABEDI Ltd, a retail business, as at the end of its financial year on 30 June 2012.

Type of Inventory	A	B	C	D
Quantity in thousands of units	420	310	290	370
	Shs	Shs	Shs	Shs
Cost price per unit	230	450	320	170
Cost of replacement per unit	280	410	218	180
Estimated cost of selling per unit	190	160	130	80
Expected selling price per unit	450	600	480	270

The company's policy is to realize a gross margin of 25% on the selling price.

Required:

The value of inventory (using the provision of IAS 12 that will appear in the statement of financial position of ABEDI Ltd as at 30th June 2012. (20 marks)

4. (i) With reference to IAS 36 (Impairment of Assets), identify any Five circumstances that may indicate that an asset has been impaired. (5 marks)
- (ii) A Ltd acquired 80% shares of B Ltd and 30% shares of C ltd. The draft statements are shown below for the year ended 31st March 2013.

Income statement for the year ended 31st March 2013

	A Ltd	B Ltd	C Ltd
	Shs.M.	Shs.M.	Shs.M.
Sales revenue	8 900	6 200	4 500
Cost of sales	(6 800)	(5 050)	(3 200)
Gross profit	2 100	1 150	1 300
Distribution cost	(300)	(210)	(150)
Administration Expenses	(420)	(260)	(140)
Operating profit	1 380	680	1 010
Ordinary share dividend: B Ltd	120	-	-
C Ltd	40	-	-
Financial cost	(30)	(20)	(10)
Profit before tax	1 510	660	1 000
Taxation	(100)	(50)	(40)
Profit after tax	1 410	610	970
Extra-ordinary item	(30)	20	10
Profit after extra-ordinary item	1 380	630	970
Dividend: Proposed	(200)	(150)	(10)
Retained profit for the year	1 180	480	960
Retained profit b/f	1 800	1 200	1 500
Retained Profit c/f	2 980	1 680	2 460

Additional information:

1. B Ltd sold goods to A Ltd for Shs.160M making a profit of 25% on selling price. All of these goods remained unsold at the end of the year.
2. B Ltd sold goods to C Ltd at Shs.120M making a profit of Shs.10M.

Required

- (i) Consolidated income statement for the year ended 31st March 2013
- (ii) Statement of changes in retained earnings. (15 marks)



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE (ENVIRONMENTAL HEALTH)

HEH 311: GEOMEDICINE

DATE: Monday, 31st March, 2014

TIME: 8.00 a.m. – 10.00 a.m.

INSTRUCTIONS:

SECTION A:

Answer **ALL** questions (20 marks)

1. State and explain three forms of balneotherapy and explain their utility as curative and therapeutic measures in human health. (6 marks)
2. Citing examples, explain the health implications of exposure to high levels of arsenic. (5 marks)
3. Draw a hypothetical dose-response curve and use it to explain the three major categories of trace elements. (5 marks)
4. Explain the negative effects of geophagy (4 marks)

SECTION B:

Answer question **FIVE (5)** and any other **TWO (50 marks)**

5. Contemplate on the environmental health implications of East Africa Rift-Valley and volcanism on human and animal health. (20 marks)

6. Cases of lung cancer have been reported to the disease surveillance office in your work station. Epidemiological investigations have indicated that the major cause of this condition is elevated radon level in the houses where most of the victims live. As an environmental health officer, discuss the best approaches/interventions you will recommend to the public to reduce radon levels in their houses. (15 marks)
7. Discuss the health implications and socio-economic implications of iodine deficiency and outline how these can be controlled. (15 marks)
8. Citing relevant examples, discuss the connection between water hardness and health. (15 marks)



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UNIVERSITY EXAMINATIONS 2013/2014
SECOND SEMESTER EXAMINATION FOR BEGINNERS IN CHINESE LANGUAGE AND
CULTURE
CHL 012: BASIC CHINESE READING

DATE: Thursday, 27th March 2014

TIME: 2.00 p.m. – 4.00 p.m.

STUDENT No.: _____

INSTRUCTIONS: Answer question ONE (compulsory) and any other TWO questions.

Q1. a) Read the following passage below about lín liù and from the words in the brackets; select the most appropriate words to fit in (1 mark for each blank space) (10marks)

(学生, 到, 汉语, 叫, 人, 岁, 是, 口, 都, 从,)

我-----林刘, 今年十二-----, 是 肯尼亚他 大学的-----。我喜欢 (xǐhuan) 学习-----。我们家有五-----人; 我爸爸, 我妈妈我两个姐姐和我。我妈妈和爸爸-----是 肯尼亚-----。我爸爸----- 老师。我 ----- 小-----大都喜欢读书。

Q1. b) Translate the following sentences into English. (2 marks each)

- i. wǒmen shì liúxuésēng.
- ii. tāmen dōu shì hànyǔ lǎoshī.
- iii. wǒ èrshí wǔ suì
- iv. nǐ zài jǐ bān?
- v. nǐ shì yīngguórén ma?
- vi. chà liǎng fēn jiǔ diǎn.
- vii. shàngwǔ cóng bā diǎn dào jiǔ diǎn shàng kǒuyǔ kè.

- viii. zài zhège jiàoshì de yòubiān。
ix. zhè shì shéi de shū?
x. Qǐngwèn, cèsuǒ zài nǎ'r?

Q2. A) Arrange the words into sentences. (2 marks each)

- I. shì zhè xuéxiào wǒmen
II. de sùshè pángbiān shítáng zài
III. jǐ xīngqī jīntiān
IV. fēn qī diànshì diǎn kàn èrshí
V. diǎn jǐ xiànzài

Q2. B) Translate the sentences into pinyin and indicate the tones. (2 marks each)

- I. 我没有钱。
II. 对，在这儿。
III. 我们的学校很大。
IV. 那是中国学生宿舍。
V. 我是学生，你呢？

Q3. For each of the given word below, form a sentence either in characters or pinyin with the right tones, without repeating the same sentence twice. (2 marks each)

1. 在 zài
2. 什么 shénme
3. 要 yào
4. 有 yǒu
5. 是 shì

Q5. Read the following passage and answer all the following questions in English. (2 marks each)

Nǐmen hǎo! Wǒ xìng wáng, jiào wáng píng. Shì zhōngguó rén. Wǒ de lǎoshī jiào jié fū. Wǒmen lǎoshī shì yīngguó rén. Wǒ jīnnián èrshí liù suì. Zhè shì wǒmen de xuéxiào. Wǒmen de xuéxiào hěn dà. Wǒ zài yī bān xuéxí yīngyǔ. Zhè shì wǒmen shàngkè de dìfāng. Nà shì liú xuéshēng sùshè. Shítáng zài sùshè de pángbiān. Wǒmen jiàoshī zài liú xuéshēng sùshè de yòubiān. Wǒmen xuéxiào bù xiǎo. Wǒmen bān yǒu liùshí gè xuésheng, sānshí wǔ gè shì nǚshēng.

- I. Jīnnián tā duō dà?
- II. Tāmen shàngkè de dìfāng zài nǎ'r?
- III. Tā de bān yǒu duōshǎo nánshēng
- IV. tāmen xuéxiào dà bú dà?
- V. xuésheng jiào shénme míngzi?
- VI. Where is the dormitory?
- VII. What is his surname?
- VIII. What is the nationality of their teacher?
- IX. How many students are in his class?
- X. What does he study?



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE

BBA 415: COMMERCIAL LAW

DATE: FRIDAY 4TH APRIL 2014

TIME: 11.00 A.M-1.00P.M

INSTRUCTIONS

Answer question ONE (1) and any other two (2) questions

1. a) Differentiate the following;
 - i) Pledge and bailment (4 marks)
 - ii) Pledge and Mortgage (4 marks)
- b) Explain circumstances under which right of particular lien is available to bailee. (7 marks)
- c) Dan hires a car in Nairobi from Kim expressly to use for traveling to Mombasa. Dan drives the "the car with due care, but instead of going to Mombasa, he goes to Kisumu. The car accidentally runs into Peter's house and injures his wife and daughter.

Tasks

- i) Based on the duties of bailee as provided by the contract of bailment, explain the legal duties of both Dan and Kim. (10 marks)
 - ii) In your opinion, who should be held liable (give reasons). (5 marks)
2. Explain circumstances under which a surety may be discharged from liability. (20 marks)
 3. Explain the characteristics of bailment. (20 marks)
 4. Explain the duties of a common carrier. (20 marks)
 5. Discuss the essentials of the doctrine of reputed ownership. (20 marks)



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UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
ECONOMICS AND FINANCE AND BACHELOR OF COMMERCE

EET 300: MICROECONOMICS THEORY III

DATE: FRIDAY 4TH APRIL 2014

TIME: 2.00 P.M. – 4.00 P.M.

INSTRUCTIONS

Answer Question One and any other TWO Questions

Question One

Write brief notes on each of the following concepts. Be as precise as you can.

(6 marks each)

- a) Optimization and equilibrium
- b) Net put vector
- c) Shepherd's Lemma
- d) Marginal ratter of Technical Substitution
- e) Stackelberg equilibrium

Question Two

A maize farmer produces using two inputs labour, (L) , and fertilizer, (K). The farmer's profit function is given by

$$\pi = \frac{p^2}{\sqrt{wr}}$$

Where P is price of maize per bag and r and w are the unit prices of fertilizer and labour respectively. Fertilizer is measured in 1 kg bag, while labour is measured in Man hours.

- a) A legitimate profit function is convex, and positively linearly homogeneous in both input and output prices. Is the above function legitimate? Show your working. (10 marks)
- b) If maize sells at Kshs. 500 per bag, labour costs Kshs. 100 per hour and fertilizer cost Kshs. 25 per 1kg bag, determine the number of bags of maize that will maximize the farmer's profit. How much will this farmer spend on both labour and fertilizer? (10 marks)

Question Three

- a) Highlight five properties of the cost function (5 marks)
- b) Suppose that a firm's production function is given as

$$Q = 2x_1^{0.5} x_2^{0.4}$$
 Where x_1 and x_2 are two inputs. Derive the corresponding cost function. (15 marks)

Question Four

Consider the following consumer's expenditure function

$$E(P, U) = UP_1^a P_2^{1-a}$$

Where P_1 and P_2 are the prices for two goods X_1 and X_2 respectively, and U is Utility.

- a) State and derive the Slutsky's equation (10 marks)
- b) Given the expenditure function above, demonstrate the Slutsky's equation (10 marks)

Question Five

- a) A long run average cost function for each firm in a competitive industry is given as:

$$c(q) = \frac{q^2}{3} - 2q + 13, \text{ where } q \text{ represents output. The market demand for the product is given as } q = 1250 - 50p, \text{ where } p \text{ is the unit price of output in shillings,}$$

- i) Determine the equilibrium output for each firm in the industry (2 marks)
- ii) What is the optimal number of firms in this industry? (2 marks)
- iii) Suppose a quantity tax of Ksh. 6 is imposed in the market, what will be the optimal number of firms in the industry? (2 marks)

b) A duopoly industry faces a linear inverse demand function given by $P = 100 - Y$, where $Y = Y_1 + Y_2$, and Y_1 and Y_2 are the outputs by firms 1 and 2 respectively. The cost function for the two firms are $C_1 = 10Y_1$ and $C_2 = \frac{Y_2^2}{2}$.

- i) Suppose firm 1 is a quantity leader, find the equilibrium, price and quantities in the industry. (4 marks)
- ii) Suppose firm 1 is a price leader, how would the answers in (i) above change? (4 marks)
- iii) Suppose the two firms colluded to maximize their joint profits, how much would each produce, and at what price would profits be maximized. (6 marks)



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE

BBA 101: BUSINESS LAW I

DATE: FRIDAY 4TH APRIL 2014

TIME: 2.00 P.M. – 4.00 P.M.

INSTRUCTIONS

Answer question ONE and any other TWO questions

- Q.1 a) Explain the jurisdiction of the following:
- i) District magistrate Court (5 marks)
 - ii) High Court (5 marks)
 - iii) Resident Magistrate court (5 marks)
- b) Explain the term source of law and discuss how constitution, legislation and African customary law are considered sources of Kenyan Law. (5 marks)
- c) Discuss the term tort and explain remedies that a person committed for an offence of tort may pray for in a court of law. (10 marks)
- Q.2 “All contracts are agreements, but all agreements are not contracts”.
- i) Explain the above statement (5 marks)
 - ii) Discuss the significance of the word agreement in the definition of “contract” (10 marks)
 - iii) Explain the remedy for a breach of agreement in a contracted relation. (5 marks)
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- Q.3 i) Discuss the significance of consideration in a contract. (10 marks)
ii) Explain the effect of past consideration in a contract. (10 marks)
- Q.4 Explain the legal effects of the following in a contract:
i) Minor (10 marks)
ii) Drunk person (10 marks)
- Q.5 Explain the term negligence and discuss its effect in tort. (20 marks)



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UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ECONOMICS

EAE 404: THE ECONOMICS OF PUBLIC ENTERPRISES

DATE: FRIDAY 4TH APRIL 2014

TIME: 2.00P.M-4.00P.M

INSTRUCTIONS

Answer question one and any other two questions

1. (a) ✓ State and explain the two dimensions of public enterprises. (4 marks)
(b) ✓ Using diagrams; explain the following pricing adopted by public enterprises.
 - i) ✓ Marginal cost pricing. (3 marks)
 - ii) ✓ Average cost pricing (3 marks)
 - iii) ✓ Two part pricing (3 marks)(c) ✓ Discuss the three principle of determining pricing policy that may be adopted by public enterprises. (9 marks)
(d) ✓ Outline with brief explanation; four management principles that govern the relationship between government and public enterprise management. (8 marks)
2. (a) ✓ Giving examples from Kenya, explain the following forms of public enterprises.
 - i) ✓ Departmental organizations (5 marks)
 - ii) ✓ Public corporations (5 marks)
 - iii) ✓ Public companies (5 marks)(b) ✓ Explain the five classifications of public enterprises. (5 marks)
3. ✓ Discuss any ten rationale for the establishment of public enterprises in a country. (20 marks)

4. (a) Reforms of public enterprises are suggested due to micro reasons. State and explain any four reasons. (8 marks)
- (b) Explain the following public enterprise reform strategies.
- i) Privatization (4 marks)
 - ii) Public-private partnership (4 marks)
 - iii) Restructuring (4 marks)
5. (a) Explain how the presence of public enterprises in Kenya has helped to minimize regional imbalances. (10 marks)
- b) Public enterprises can be evaluated using various criteria. Explain any five criteria that have been used in Kenya. (10 marks)



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

CITY CAMPUS

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENVIRONMENTAL HEALTH HEH 416: CONSERVANCY AND DRAINAGE

DATE: Friday 4th April 2014

TIME: 4.30 p.m. – 6.30 p.m.

INSTRUCTIONS:

SECTION A: ANSWER ALL QUESTIONS

- Q.1) a) Highlight five (5) reasons why the government has adopted community-led-to Total sanitation approach as a national policy to improve sanitation level in the country. (4 Marks)
- b) State four (4) limitations of a bucket latrine. (4 Marks)
- c) Give four factors to be considered when choosing an Eco-san system. (4 Marks)
- d) Highlight any four (4) criteria that a drainage system must meet in order to serve the intended purpose. (4 Marks)
- e) Give your types of materials that can be used in drainage system. (4 Marks)

SECTION B: ANSWER QUESTION TWO (2) AND ANY OTHER TWO (2) QUESTIONS

- Q.2) a) Explain the design and functioning of various type soil fittings found in the residential houses. (10 Marks)
- b) Identify and explain the virus traps used in drainage systems. (10 Marks)
- Q.3) Explain the key steps followed in triggering a village. (15 Marks)
- Q.4) Describe the Vietnamese double vault toilet as an example of adaptation for “washers”. (15 marks)
- Q.5) Using a relevant diagram explain the faecal-oral transmission routes. (15 Marks)
- Q.6) Explain why eco-san methods for waste disposal have not been adopted widely despite their benefits in the community. (15 Marks)



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF ARTS IN SECURITY MANAGEMENT AND POLICE STUDIES

KPS 202: CRIME PREVENTION, CONTROL AND COMMUNITY SAFETY

DATE: Friday, 4th April 2014

TIME: 5.30 p.m. – 7.30 p.m.

INSTRUCTIONS:

- The examination has five questions.
- Question one is compulsory.
- Attempt other two questions.

Question One

- (a) Define the term community safety and crime prevention. (5 marks)
- (b) Explain with examples the three typologies of crime prevention. (15 marks)
- (c) Explain the following philosophies in crime prevention:
- (i) Retribution
 - (ii) Vengeance
 - (iii) Deterrence
 - (iv) Just deserts
 - (v) Incapacitation (10 marks)
- (d) Critically appraise the classical theory by Cesare Beccaria in crime prevention. (10 marks)

Question Two

Discuss the strengths and weaknesses of any three models of crime prevention. (20 marks)

Question Three

Discuss Crime Prevention Through Environmental Design (CPTED). (20 marks)

Question Four

The community has a unique opportunity to participate in actions of crime prevention and safety. (20 marks)

Question Five

Discuss the era of modernity and post-modernity (later modernity) as reaction against “traditional practices of retributive punishment”. (Discuss in line with classical and positive School) (20 marks)



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
ECONOMICS

EES 301: STATISTICS FOR ECONOMISTS II

DATE: TUESDAY 1ST APRIL, 2014

TIME: 8.00 A.M – 10.00 A.M

INSTRUCTIONS:

- Answer question ONE and ANY other TWO

Question One

- a) To estimate the mean age for a population of 4000 employees, a simple random sample of 50 employees is selected. Would you use finite population correction factor in calculating standard error of the mean? Explain (3 marks)
- b) Distinguish between consistency and efficiency in reference to statistical estimator? (4 marks)
- c) Highlight conditions necessary for the Students. t – distribution to be used (3 marks)
- d) For the United States, the mean monthly Internet bill is \$32.79 per household (CNBC, January 18, 2006). A sample of 50 households in a southern state showed a sample mean of \$30.63. Use a population standard deviation of $\sigma = \$5.60$. Required
- i) Formulate hypothesis for a test to determine whether the sample data support the conclusion that the mean monthly internet bill in the southern state is less than the national mean of \$32.79. (2 marks)
 - ii) What is the value of the test statistic and the P – value (4 marks)
 - iii) At $\alpha = 0.01$, what is your conclusion (4 marks)

e) Data for two variables x (independent) and y (dependent) follows:

x	1	2	3	4	5
y	3	7	5	11	14

Develop the estimated regression equation for these data and interpret the coefficient

(4 marks)

f) The following 3 by 3 contingency table contains observed frequencies for a sample of 240

Test for independence of the row and column variables with alpha value of 0.05

Row Variable	Column variable		
	A	B	C
P	20	30	20
Q	30	60	25
R	10	15	30

(6 marks)

Question Two

- i) Fertile areas of Nyanza region had relatively high population growth rates during 1990s. Data were collected on residents living on the fertile as well as non fertile locations of the Nyanza. Assume that the following sample results were obtained on the ages of individuals in the two populations.

Fertile Areas

Non Fertile areas

$$n_1 = 150$$

$$n_2 = 175$$

$$\bar{X}_1 = 39.3 \text{ years}$$

$$\bar{X}_2 = 35.4 \text{ years}$$

$$S_1 = 16.8 \text{ years}$$

$$S_2 = 15.2 \text{ years}$$

Test the hypothesis of no difference between two population means. Use $\alpha = 0.05$

(5 marks)

ii) A population proportion is 0.4. A simple random sample of size 200 will be taken and mean of sample proportions will be used to estimate the population proportion. What is the probability that the sample proportions will be within ± 0.03 of the population proportion? (5 marks)

iii) Which one would produce a larger confidence interval under the same circumstances? Explain or/ and illustrate

a) A 90% or 95% confidence level (3 marks)

b) A Student t – distribution or a normal distribution (3 marks)

iv) Briefly explain the steps that need to be followed while testing hypothesis. (4 marks)

Question Three

a) As more Kenyans seek escape from urban pressures, the burden on our parks has shown a marked increase with the rise in the weekend campers. Lion magazine recently reported that Metumi national park in Murang'a hired a seasoned third year economist from K.U to study the financial position of the Park. Part of his effort required the comparison of Park revenues from various sources, including camping fees, fishing licences and canoe rentals. Displayed here are the data for several randomly selected visitors. Determine if there is difference in the mean revenues the park receives from these three activities .

Visitor	Camping	Fishing	Canoeing
1	\$47	\$30	\$19
2	32	18	25
3	35	27	20
4	25	35	22
5	38	-	25
6	35	-	-

(12 marks)

- b) You are studying the time it take for an air – controller to read a complex radar display and react to it under certain standardized conditions. By conducting one trial with each randomly selected controllers, you obtain the following statistics.

$$\bar{X} = 3.15 \text{ seconds}$$

$$\sum (X - \bar{X})^2 = 20$$

$$n = 25$$

What is the 90% confidence interval for mean time to read and react to the display?

(5 marks)

- c) Distinguish between simple and multiple regression

(3 marks)

Question Four

- a) In hypothesis testing one can commit either type I or type II errors. Use relevant illustrations to explain how this possible (4 marks)
- b) A state of Washington's Public Interest Research Group (PIRG) study showed that 46% of full time college students work 25 or more hours per week. The PIRG study provided data on the effects of working on grades (*USA Today*, April 17, 2002). A sample of 200 students included 90 who worked 1 – 15 hours per week, 60 who worked 16 – 24 hours per week and 50 who worked 25 – 34 hours per week. The sample number of students indicating their work had a positive effect, no effect or a negative on grades is as follows:

Effect on Grades				
Hours worked per week	Positive	None	Negative	Total
1 – 15 hours	26	50	14	90
16 – 24 hours	16	27	17	60
25 – 34 hours	11	19	20	50

Conduct a test of independence to determine whether the effects on grades are independent of the hours worked per week. Use $\alpha = 0.05$. What is your conclusion?

(10 marks)

c) Distinguish between the following terms:

- i) Null and alternative hypothesis (3 marks)
- ii) One - tailed test and two - tailed test (3 marks)

Question Five

a) The following data show the number of shares covered by option grants and the number of shares outstanding for 13 companies (*Bloomberg Personal Finance, January/February, 2000*).

Companies	Shares of option Grants Outstanding (Millions)	Common Shares Outstanding (millions)
Adobe Sytems	20.3	61.8
Apple Computer	52.7	160.9
Applied materials	109.1	375.4
Auto desk	15.7	58.9
Best Buy	44.2	203.8
Fruit of the Loom	14.2	66.9
ITT Industries	18.0	87.9
Merril Lynch	89.9	365.5
Novel	120.2	335.0
Parametric technology	78.3	269.3
Reebok International	12.8	56.1
Silicon Graphics	52.6	188.8
Toys "R" Us	54.8	247.6

Required:

- i) Develop the estimated regression equation that could be used to estimate the number of shares of option grants outstanding given the number of common shares outstanding (8 marks)
- ii) Use the estimated regression equation to estimate the number of shares of option grants outstanding for a company that has 150 million shares of common stock outstanding (2 marks)

iii) Do you believe the estimated regression equation would provide a good prediction of the number of shares of option grants outstanding? Use r^2 to support your answer (4 marks)

b) Distinguish between the following terms as used in statistics:

- i) Central limit theorem and finite population correction factor (3 marks)
- ii) Sampling error and standard error (3 marks)

USEFUL FORMULAE

1. Z- scores:

$$Z = \frac{x_i - \mu}{\delta}$$

2. Confidence Interval for the population mean:

$$\mu = \bar{x} \pm Z_{\alpha/2} \delta_{\bar{x}} \text{ where } \delta_{\bar{x}} \text{ is the standard error of the mean.}$$

3. The standard error for the mean:

$$\delta_{\bar{x}} = \frac{\delta}{\sqrt{n}}, \text{ where } \delta \text{ is the population standard deviation and } n \text{ is the sample size.}$$

4. The standard error for the proportion:

$$\delta_p = \sqrt{\frac{P(1-P)}{n}}, \text{ where } \delta \text{ is the population standard deviation and } n \text{ is the}$$

5. Calculated statistic for a single mean:

$$Z_{cal} = \frac{\bar{x} - \mu}{\delta_{\bar{x}}}$$

6. Chi-square test statistic:

$$\chi_{cal}^2 = \sum \frac{(O - E)^2}{E}, \text{ where } O \text{ is the observed frequency and } E \text{ is the expected frequency.}$$

7. F-test statistic:

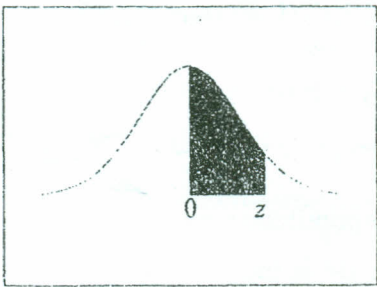
$$F_{cal} = \frac{\delta_a^2}{\delta_w^2}, \text{ where } \delta_a^2 \text{ and } \delta_w^2 \text{ are the variances among the sample means and within samples respectively. The variances are given as:}$$

$$\delta_a^2 = \frac{\sum n_i (\bar{X}_i - \mu)^2}{k - 1} \text{ where } \mu \text{ is the grand mean and } k \text{ is the number of samples;}$$

and

$$\delta_w^2 = \frac{n_1 s_1^2 + n_2 s_2^2 + \dots + n_k s_k^2}{(n_1 + n_2 + \dots + n_k) - k} \text{ where } s_i^2 \text{ represents the sample variance.}$$

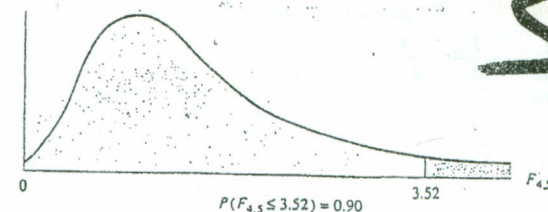
Standard Normal Distribution Table



z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2517	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.6	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4864	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.9	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990
3.1	.4990	.4991	.4991	.4991	.4992	.4992	.4992	.4992	.4993	.4993
3.2	.4993	.4993	.4994	.4994	.4994	.4994	.4994	.4995	.4995	.4995
3.3	.4995	.4995	.4995	.4996	.4996	.4996	.4996	.4996	.4996	.4997
3.4	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4998
3.5	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998

TABLE F The *t*-Distribution

	0.900	0.700	0.500	0.300	0.200	0.100	0.050	0.020	0.010	α value	two tailed-test
	0.100	0.300	0.500	0.700	0.800	0.900	0.950	0.980	0.990	CL	
	0.450	0.350	0.250	0.150	0.100	0.050	0.025	0.010	0.005	α value	one tailed-test
	0.550	0.650	0.750	0.850	0.900	0.950	0.975	0.990	0.995	CL	
d.f.	Values of <i>t</i>										
1	0.158	0.510	1.000	1.963	3.078	6.314	12.706	31.821	63.657		
2	0.142	0.445	0.816	1.386	1.886	2.920	4.303	6.965	9.925		
3	0.137	0.424	0.765	1.250	1.638	2.353	3.182	4.541	5.841		
4	0.134	0.414	0.741	1.190	1.533	2.132	2.776	3.747	4.604		
5	0.132	0.408	0.727	1.156	1.476	2.015	2.571	3.365	4.032		
6	0.131	0.404	0.718	1.134	1.440	1.943	2.447	3.143	3.707		
7	0.130	0.402	0.711	1.119	1.415	1.895	2.365	2.998	3.499		
8	0.130	0.399	0.706	1.108	1.397	1.860	2.306	2.896	3.355		
9	0.129	0.398	0.703	1.100	1.383	1.833	2.262	2.821	3.250		
10	0.129	0.397	0.700	1.093	1.372	1.812	2.228	2.764	3.169		
11	0.129	0.396	0.697	1.088	1.363	1.796	2.201	2.718	3.106		
12	0.128	0.395	0.695	1.083	1.356	1.782	2.179	2.681	3.055		
13	0.128	0.394	0.694	1.079	1.350	1.771	2.160	2.650	3.012		
14	0.128	0.393	0.692	1.076	1.345	1.761	2.145	2.624	2.977		
15	0.128	0.393	0.691	1.074	1.341	1.753	2.131	2.602	2.947		
16	0.128	0.392	0.690	1.071	1.337	1.746	2.120	2.583	2.921		
17	0.128	0.392	0.689	1.069	1.333	1.740	2.110	2.567	2.898		
18	0.127	0.392	0.688	1.067	1.330	1.734	2.101	2.552	2.878		
19	0.127	0.391	0.688	1.066	1.328	1.729	2.093	2.539	2.861		
20	0.127	0.391	0.687	1.064	1.325	1.725	2.086	2.528	2.845		
21	0.127	0.391	0.686	1.063	1.323	1.721	2.080	2.518	2.831		
22	0.127	0.390	0.686	1.061	1.321	1.717	2.074	2.508	2.819		
23	0.127	0.390	0.685	1.060	1.319	1.714	2.069	2.500	2.807		
24	0.127	0.390	0.685	1.059	1.318	1.711	2.064	2.492	2.797		
25	0.127	0.390	0.684	1.058	1.316	1.708	2.060	2.485	2.787		
26	0.127	0.390	0.684	1.058	1.315	1.706	2.056	2.479	2.779		
27	0.127	0.389	0.684	1.057	1.314	1.703	2.052	2.473	2.771		
28	0.127	0.389	0.683	1.056	1.313	1.701	2.048	2.467	2.763		
29	0.127	0.389	0.683	1.055	1.311	1.699	2.045	2.462	2.756		
30	0.127	0.389	0.683	1.055	1.310	1.697	2.042	2.457	2.750		
40	0.126	0.388	0.681	1.050	1.303	1.684	2.021	2.423	2.704		
60	0.126	0.387	0.679	1.045	1.296	1.671	2.000	2.390	2.660		
120	0.126	0.386	0.677	1.041	1.289	1.658	1.980	2.358	2.617		
∞	0.126	0.385	0.674	1.036	1.282	1.645	1.960	2.326	2.576		

TABLE G The *F*-Distribution

Denominator degrees of freedom	$F_{0.90; \alpha = 0.10}$								
	1	2	3	4	5	6	7	8	9
1	39.86	49.50	53.59	55.83	57.24	58.20	58.91	59.44	59.86
2	8.53	9.00	9.16	9.24	9.29	9.33	9.35	9.37	9.38
3	5.54	5.46	5.39	5.34	5.31	5.28	5.27	5.25	5.24
4	4.54	4.32	4.19	4.11	4.05	4.01	3.98	3.95	3.94
5	4.06	3.78	3.62	3.52	3.45	3.40	3.37	3.34	3.32
6	3.78	3.46	3.29	3.18	3.11	3.05	3.01	2.98	2.96
7	3.59	3.26	3.07	2.96	2.88	2.83	2.78	2.75	2.72
8	3.46	3.11	2.92	2.81	2.73	2.67	2.62	2.59	2.56
9	3.36	3.01	2.81	2.69	2.61	2.55	2.51	2.47	2.44
10	3.29	2.92	2.73	2.61	2.52	2.46	2.41	2.38	2.35
11	3.23	2.86	2.66	2.54	2.45	2.39	2.34	2.30	2.27
12	3.18	2.81	2.61	2.48	2.39	2.33	2.28	2.24	2.21
13	3.14	2.76	2.56	2.43	2.35	2.28	2.23	2.20	2.16
14	3.10	2.73	2.52	2.39	2.31	2.24	2.19	2.15	2.12
15	3.07	2.70	2.49	2.36	2.27	2.21	2.16	2.12	2.09
16	3.05	2.67	2.46	2.33	2.24	2.18	2.13	2.09	2.06
17	3.03	2.64	2.44	2.31	2.22	2.15	2.10	2.06	2.03
18	3.01	2.62	2.42	2.29	2.20	2.13	2.08	2.04	2.00
19	2.99	2.61	2.40	2.27	2.18	2.11	2.06	2.02	1.98
20	2.97	2.59	2.38	2.25	2.16	2.09	2.04	2.00	1.96
21	2.96	2.57	2.36	2.23	2.14	2.08	2.02	1.98	1.95
22	2.95	2.56	2.35	2.22	2.13	2.06	2.01	1.97	1.93
23	2.94	2.55	2.34	2.21	2.11	2.05	1.99	1.95	1.92
24	2.93	2.54	2.33	2.19	2.10	2.04	1.98	1.94	1.91
25	2.92	2.53	2.32	2.18	2.09	2.02	1.97	1.93	1.89
26	2.91	2.52	2.31	2.17	2.08	2.01	1.96	1.92	1.88
27	2.90	2.51	2.30	2.17	2.07	2.00	1.95	1.91	1.87
28	2.89	2.50	2.29	2.16	2.06	2.00	1.94	1.90	1.87
29	2.89	2.50	2.28	2.15	2.06	2.00	1.94	1.90	1.86

TABLE G The F-Distribution (continued)

Denominator degrees of freedom	$F_{0.90; \alpha = 0.10}$									
	Numerator degrees of freedom									
	1	2	3	4	5	6	7	8	9	
30	2.88	2.49	2.28	2.14	2.05	1.98	1.93	1.88	1.85	
40	2.84	2.44	2.23	2.09	2.00	1.93	1.87	1.83	1.79	
60	2.79	2.39	2.18	2.04	1.95	1.87	1.82	1.77	1.74	
120	2.75	2.35	2.13	1.99	1.90	1.82	1.77	1.72	1.68	
∞	2.71	2.30	2.08	1.95	1.85	1.77	1.72	1.67	1.63	

Denominator degrees of freedom	$F_{0.90; \alpha = 0.10}$									
	Numerator degrees of freedom									
	10	12	15	20	24	30	40	60	120	∞
1	60.19	60.71	61.22	61.74	62.00	62.26	62.53	62.79	63.06	63.33
2	9.39	9.41	9.42	9.44	9.45	9.46	9.47	9.47	9.48	9.49
3	5.23	5.22	5.20	5.18	5.18	5.17	5.16	5.15	5.14	5.13
4	3.92	3.90	3.87	3.84	3.83	3.82	3.80	3.79	3.78	3.76
5	3.30	3.27	3.24	3.21	3.19	3.17	3.16	3.14	3.12	3.11
6	2.94	2.90	2.87	2.84	2.82	2.80	2.78	2.76	2.74	2.72
7	2.70	2.67	2.63	2.59	2.58	2.56	2.54	2.51	2.49	2.47
8	2.54	2.50	2.46	2.42	2.40	2.38	2.36	2.34	2.32	2.29
9	2.42	2.38	2.34	2.30	2.28	2.25	2.23	2.21	2.18	2.16
10	2.32	2.28	2.24	2.20	2.18	2.16	2.13	2.11	2.08	2.06
11	2.25	2.21	2.17	2.12	2.10	2.08	2.05	2.03	2.00	1.97
12	2.19	2.15	2.10	2.06	2.04	2.01	1.99	1.96	1.93	1.90
13	2.14	2.10	2.05	2.01	1.98	1.96	1.93	1.90	1.88	1.85
14	2.10	2.05	2.01	1.96	1.94	1.91	1.89	1.86	1.83	1.80
15	2.06	2.02	1.97	1.92	1.90	1.87	1.85	1.82	1.79	1.76
16	2.03	1.99	1.94	1.89	1.87	1.84	1.81	1.78	1.75	1.72
17	2.00	1.96	1.91	1.86	1.84	1.81	1.78	1.75	1.72	1.69
18	1.98	1.93	1.89	1.84	1.81	1.78	1.75	1.72	1.69	1.66
19	1.96	1.91	1.86	1.81	1.79	1.76	1.73	1.70	1.67	1.63
20	1.94	1.89	1.84	1.79	1.77	1.74	1.71	1.68	1.64	1.61
21	1.92	1.87	1.83	1.78	1.75	1.72	1.69	1.66	1.62	1.59
22	1.90	1.86	1.81	1.76	1.73	1.70	1.67	1.64	1.60	1.57
23	1.89	1.84	1.80	1.74	1.72	1.69	1.66	1.62	1.59	1.55
24	1.88	1.83	1.78	1.73	1.70	1.67	1.64	1.61	1.57	1.53
25	1.87	1.82	1.77	1.72	1.69	1.66	1.63	1.59	1.56	1.52
26	1.86	1.81	1.76	1.71	1.68	1.65	1.61	1.58	1.54	1.50
27	1.85	1.80	1.75	1.70	1.67	1.64	1.60	1.57	1.53	1.49

TABLE G The F-Distribution (continued)

Denominator degrees of freedom	$F_{0.90; \alpha = 0.10}$									
	Numerator degrees of freedom									
	10	12	15	20	24	30	40	60	120	∞
28	1.84	1.79	1.74	1.69	1.66	1.63	1.59	1.56	1.52	1.48
29	1.83	1.78	1.73	1.68	1.65	1.62	1.58	1.55	1.51	1.47
30	1.82	1.77	1.72	1.67	1.64	1.61	1.57	1.54	1.50	1.46
40	1.76	1.71	1.66	1.61	1.57	1.54	1.51	1.47	1.42	1.38
60	1.71	1.66	1.60	1.54	1.51	1.48	1.44	1.40	1.35	1.29
120	1.65	1.60	1.55	1.48	1.45	1.41	1.37	1.32	1.26	1.19
∞	1.60	1.55	1.49	1.42	1.38	1.34	1.30	1.24	1.17	1.00

Denominator degrees of freedom	$F_{0.95; \alpha = 0.05}$									
	Numerator degrees of freedom									
	1	2	3	4	5	6	7	8	9	
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

CITY CAMPUS

**SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE**

PHI 413: HEALTH NEEDS ASSESSMENT

DATE: WEDNESDAY 2ND APRIL 2014

TIME: 8.00 A.M. – 10.00 A.M.

SECTION A: (Answer all questions, Compulsory)

1. Define the following terminologies:
 - a) Health Needs (2 marks)
 - b) Inequalities in health (2 marks)
2. List four benefits of a Health Needs Assessment. (4 marks)
3. Briefly describe the selection criteria used before conducting a health needs assessment exercise. (4 marks)
4. Name four distinct types of a HNA population, and give examples of each. (4 marks)
5. Differentiate between levels of health prevention and methods of health prevention. (4 marks)

SECTION B: (Answer question 6 (compulsory) and any other two in this section)

6. You have been nominated the County Representative for health, in your county, that faces so many health challenges.
 - (a) Discuss how you would plan a health needs assessment for your writing. (15 marks)

- (b) What would you consider before implementing a health needs assessment in your county. (5 marks)
7. Write a descriptive essay on international health needs assessment. (15 marks)
8. (a) Define the term Evaluation. (1 mark)
(b) Outline four importances of carrying out an evaluation. (2 marks)
(c) Discuss the following types of evaluations.
(i) Process
(ii) Impact
(iii) Outcome
(12 marks)
9. You are the health planner, in the local District hospital in your Division, discuss how you would conduct the following Public Health Interventions.
a) Efficacy Assessment
b) Cost Effectiveness analysis
c) Cost Benefit Analysis
(15 marks)
