

**UNIVERSITY OF ESWATINI
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF GENERAL NURSING**

FINAL EXAMINATION, NOVEMBER 2018

**COURSE TITLE: HIV PREVENTION, INFECTION AND
MANAGEMENT OF AIDS**

COURSE CODE: GNS/HSC 113

TIME ALLOCATED: TWO (2) HOURS

MARKS ALLOCATED: 75

INSTRUCTION:

- **ANSWER ALL QUESTIONS ON THE SEPARATE ANSWER SHEET PROVIDED**
- **THERE ARE 15 PRINTED PAGES INCLUDING COVER PAGE**

**DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO
BY THE INVIGILATOR**

INSTRUCTION: For each question, choose the most appropriate response and **CIRCLE** in your answer booklet the corresponding letter only, in capital letters, e.g. 76 B. Each correct response carries 1 mark.

1. The self-concept is also known as _____
 - A. Self-identity
 - B. Self esteem
 - C. Self-belief
 - D. Self-acceptance
2. Which of the following best describes sexual orientation?
 - A. The personal and private conviction people have about being masculine or feminine
 - B. The set of rules laid down by society on how people of different gender are supposed to behave
 - C. The preference that people have for sharing sexual expressions with members of the opposite sex, same sex or both
 - D. The preference of sharing sexual expressions with members of both sexes.
3. The results of a study conducted in the year 2016-2017 reported that Eswatini experienced a decline in the number of new infections of HIV. Which of the following statements summarizes the findings of the study?
 - A. There was a reduction in the prevalence rate of HIV
 - B. There was a reduction in the incidence of HIV.
 - C. There was a decline in the epidemiology of HIV
 - D. There was a decline in the receptors for HIV
4. The first cases of HIV infection in the United States were identified in five men. Which of the following characteristic did the men have in common?
 - A. They have a fully functional immune system
 - B. They were hunters
 - C. They were men having sex with men
 - D. They presented with meningitis

5. Low social status of women is one of the drivers of HIV in Eswatini. Which of the following practices contributes to the low social status of women?
 - A. Polygamy
 - B. Payment of dowry (*Lobola*)
 - C. Mobility
 - D. Infidelity
6. Which of the following is a characteristic of acute or primary infection of HIV?
 - A. Very high viral load
 - B. High CD4 cell count
 - C. Presence of oral thrush
 - D. Presence of skin infections such as herpes zoster
7. Which of the following describes latent tuberculosis?
 - A. The infected person shows signs and symptoms of disease such as coughing
 - B. The infected person has no symptoms and is not contagious
 - C. The infected person is contagious
 - D. It can lead to death if not treated
8. Presence of sexually transmitted infections predisposes one to a higher risk of acquiring HIV because_____
 - A. Impairs the integrity of the mucosa whether ulcerative or not
 - B. Attracts red blood cells around the genitalia
 - C. STIs are associated with fidelity
 - D. Reduces the amount of HIV in genital secretions
9. Healthcare workers have to ensure all of the following for condom access EXCEPT_____.
 - A. Counsel and demonstrate on correct and consistent condom use
 - B. Ensure proper condom use at household level among users
 - C. Provide adequate condoms and condom-compatible lubricants
 - D. Provide information and counselling on HIV prevention for all, especially adolescents.
10. Which among the following is **NOT** a priority group for condom usage in HIV prevention?
 - A. Sero-discordant couples
 - B. Sex workers with their clients
 - C. Men who have sex with men
 - D. Heterosexual couples who are mutually faithful

11. The following are best practices specifically in the prevention of sexually transmitted HIV EXCEPT _____.
- A. Total abstinence
 - B. Secondary abstinence
 - C. Mutual faithfulness with an uninfected partner
 - D. Universal precautions
12. Which among the following is **NOT** does not involve the laboratory (medication), in HIV prevention?
- A. Reducing the number of sexual partners
 - B. Voluntary medical male circumcision
 - C. Post exposure prophylaxis
 - D. Sexually transmitted infections screening and treatment
13. During the follow-up care for someone after offer of PEP the person is told the following EXCEPT _____
- A. To return at 1 week, 2 weeks and 4 weeks after starting PEP
 - B. To repeat HIV testing at 8 weeks after starting PEP
 - C. To repeat HIV testing at 16 weeks after starting PEP
 - D. To manage side effects
14. A relationship in which one person is infected with HIV and the other is uninfected is referred to as a _____
- A. Discordant couple
 - B. Heterosexual couple
 - C. Pre-Exposure couple
 - D. Transgender couple
15. HIV cannot be transmitted through _____
- A. Prick/cuts with contaminated needles/sharps
 - B. Intimate deep kissing
 - C. Improper (or no) sterilization & disinfection
 - D. Exposure to broken skin or open wounds of an infected person.
16. The following are some risky body fluids that require strict universal precautions except _____
- A. Blood
 - B. Semen
 - C. Vaginal discharges
 - D. Urine

17. Routine HIV tests among the general population in Swaziland are those that detects_____.
- The virus itself
 - The antibodies to the virus.
 - The DNA of the virus
 - The viral enzymes
18. When handling contaminated rubbish all of the following are true EXCEPT _____
- Used menstrual pads, nappies, used bandages out of reach of children and place in safe container
 - Use double bag for highly contagious waste products such as tissue used by TB patients
 - Pads, nappies, condoms and used bandages should be buried, burned or put in tightly sealed double bag
 - Put all the rubbish in a refuse bag and place in the rubbish bin and place near the roadside while waiting for the Town Council truck to come and collect it.
19. The following are macronutrients:
- Vitamins
 - Proteins
 - Minerals
 - Carbohydrates
- ii & iv
 - ii & iii
 - i & iii
 - ii & iv
20. People with HIV commonly present with this condition.
- TB
 - Diabetes
 - Liver problems
 - None of the above
21. Which of the following modes of HIV transmission accounts for the largest number in Eswatini?
- Blood transfusion
 - Mother to child transmission
 - Heterosexuality
 - Needle pricks

22. _____ consists of taking a combination of antiretroviral medication for about a month to prevent acquiring HIV.
- A. Prevention of mother-to-child transmission (PMTCT)
 - B. Post Exposure Prophylaxis
 - C. Highly Active Anti-retroviral Therapy (HAART)
 - D. Pre-exposure prophylaxis (Pre-EP)
23. Which of the following statements is **INCORRECT** about condom use if both partners are HIV positive?
- A. It is necessary to use condoms if both partners are HIV positive?
 - B. New infections increase viral load resulting in decreased CD4 cells affecting further weakening of immune system
 - C. Re-infection can also can also cause one to contract other sexually transmitted infections
 - D. HIV becomes less dangerous if partners living with HIV trust each other
24. People with good immune system have a CD4 count between ____
- A. 1500 - 3000 cells/mm
 - B. 500 - 1500 cells/mm
 - C. 50 - 500 cells /mm
 - D. 10 - 25 cells/mm
25. In Swaziland ARVs began to be rolled out in _____.
- A. 2005
 - B. 2002
 - C. 1989
 - D. 2007
26. HAART stands for _____
- A. Highly active Aids Treatment
 - B. High antiretroviral Aids treatment
 - C. Highly active antiretroviral therapy
 - D. Highly antiretroviral Aids Therapy
27. There are two primary goals of ART, namely _____
- A. Minimize the viral load and increase the mobility of the individual
 - B. Suppress the viral load and increase the number of the CD4 cells
 - C. Suppress the number of the CD4 cells and suppress the viral load
 - D. Suppress the viral load and increase the red cells

28. In order for a patient to be started on ART, it is important to do the following EXCEPT _____
 - A. To consult with patient's loved ones including the in laws and church members
 - B. Preparation of the client and those close to patient
 - C. Client to attend preparatory sessions which includes comprehensive education about ART
 - D. To take time in preparing the relative or care givers of the patient
29. The preparation of the HIV positive individual for ART includes the following EXCEPT _____
 - A. Blood test for CD4 count, renal and liver function tests, haemoglobin level and white blood cell count
 - B. Full examination to diagnose and manage opportunistic infections
 - C. The height of the person and presents of some enzymes in the body
 - D. Psychosocial and financial assessment
30. Ideally, how many glasses of water should a person consume daily under normal circumstances?
 - A. 2
 - B. 5
 - C. 8
 - D. 15
31. In the symptomatic phase, an HIV positive person requires daily additional calories of about -----%.
 - A. 10
 - B. 30
 - C. 50
 - D. 80
32. Based on the current ART guidelines in Swaziland, the decision to start antiretroviral therapy (ART) is based on _____
 - A. The CD4 cell count
 - B. The viral load
 - C. The presence of some opportunistic infections
 - D. Testing HIV positive

33. Which of the following statements is FALSE about antiretroviral therapy (ART)?
- A. ART increases survival rate.
 - B. ART reduces HIV-transmission.
 - C. ART is a cure for AIDS.
 - D. ART reduces hospitalization
34. The following statements could be used to encourage a 25-year old child, who is contemplating to stop taking ART, EXCEPT that _____
- A. ART boosts the immune system
 - B. ART suppresses opportunistic infections
 - C. ART has to be taken for life
 - D. ART improves nutritional status
35. Factors contributing to drug failure in ART are:
- (i) Sub-optimal ARV regimen.
 - (ii) Sub-optimal drug levels.
 - (iii) Poor adherence to therapy.
 - (iv) Re-infection with new HIV strains
- A. ii & iii
 - B. i & iii
 - C. iii & iv
 - D. i, ii, iii, & iv
36. By a minimum of _____ adherence to ART, viral suppression is achieved.
- A. 95%
 - B. 85%
 - C. 75%
 - D. 65%
37. The following are fat soluble vitamins, with the exception of _____
- (i) Vitamin A
 - (ii) Vitamin B
 - (iii) Vitamin C
 - (iv) Vitamin D
- A. i & ii
 - B. ii & iii
 - C. iii & iv
 - D. iii only

38. Which of the following best defines eligibility criteria for initiation of HAART in Swaziland?
- A. Any individual who has tested HIV positive irrespective of his CD4 count
 - B. All children born to HIV positive mothers
 - C. Only people with CD4 count of less than 500 cells/mm³
 - D. All of the above
39. According to the stages of dying proposed by Kubler-Ross, in which of the following stages do people often think 'Oh no, this cannot be happening to me.'?
- A. Depression
 - B. Denial
 - C. Anger
 - D. Bargaining
40. The fourth stage of the Kubler-Ross model of dying / loss _____?
- A. Depression
 - B. Denial
 - C. Anger
 - D. Bargaining

Scenario: Fikelephi a mother of a 6 year old daughter has been recently diagnosed with HIV. She took her daughter for HIV testing and the daughter tested negative for HIV. Fikelephi disclosed her HIV status to her mother of 60 years who was overwhelmed and discussed the situation with her siblings and neighbour. Her siblings started gossiping and shunning her. Her utensils and crockery were washed separately. The neighbour's children no longer wanted to play with Fikelephi's daughter. From this experience Fikelephi decided to isolate herself from the family members. Questions 41 - 46 refer to the above scenario.

41. Fikelephi's siblings demonstrated one of the following when they gossiped about Fikelephi:
- A. Discrimination
 - B. Stigma
 - C. Distancing
 - D. Alienation

42. Separation of Fikelephi's the utensils and crockery from the rest of the family showed _____
A. Discrimination
B. Stigma
C. Distancing
D. Alienation
43. The act of disclosing her status to her mother is often referred to as _____ disclosure.
A. Full
B. Partial
C. Complete
D. Standard
44. The fact that the neighbour's children were no longer playing with Fikelephi's child was an indication of _____
A. Hatred
B. Secondary stigma
C. Primary stigma
D. A & C
45. The behaviour of the siblings showed _____
A. Self - stigma
B. Referred stigma
C. External stigma
D. Secondary stigma
46. By isolating herself from the family Fikelephi showed _____.
A. Self - stigma
B. Referred stigma
C. External stigma
D. Secondary stigma
47. A constitution can best be defined as _____
A. A document of approved policy to govern the community members
B. A document approved by lawyers
C. The system approved by the international society
D. The system of laws and basic principles by which the state, country or an organisation is governed

48. Psychosocial needs includes the following dimensions EXCEPT;
- A. Economic
 - B. Physical
 - C. Spiritual
 - D. Emotional

Scenario: Fakazi is a 1st year UNESWA student and living with HIV. He visited a health facility and was told that he was in stage 2 of HIV infection and had syphilis which is at stage 1. His girlfriend is pregnant and about to deliver.

49. Since he is in stage 2 of HIV infection which is the likely condition he might have?
- A. Skin conditions
 - B. Tuberculosis (TB)
 - C. Kaposi sarcoma
 - D. Meningitis
50. Fakazi is likely to present with one of the following:
- A. A painless sore
 - B. Rash
 - C. Bleeding sore
 - D. A & B
51. If Fakazi was not treated and progressed to Stage 3 of syphilis he is likely to have all the following EXCEPT _____.
- A. Bone softening
 - B. Lung problems
 - C. Mental problems
 - D. Heart problems
52. The baby born by the girlfriend is at risk of all the following EXCEPT _____.
- A. High blood pressure
 - B. Body rash
 - C. Deformity
 - D. Stillbirth
53. Which of the following is not a typical indication of meningitis?
- A. Severe headache
 - B. Loss of weight
 - C. Stiff neck is an early sign
 - D. Extreme sensitivity to light

54. Which of the following does not present with a genital sore?
- A. Chlamydia
 - B. Chancroid
 - C. Genital Herpes
 - D. Syphilis
55. Which of the traditional practices below is **MOST** likely to prevent the spread of HIV in Eswatini?
- A. Reed Dance (*Umhlanga*)
 - B. Shrub ceremony (*Lusekwane*)
 - C. Tussel (*Umcwasho*)
 - D. Multiple partners (*Buganwa*)
56. Which of the following statements is **CORRECT** about HTC?
- A. Post-test counseling should be done strictly on one-on-one bases.
 - B. Pre-test counseling should be done strictly on one-on-one bases.
 - C. Post-test counseling is not very necessary for clients who have tested HIV negative.
 - D. Post-test counseling is not always necessary for clients who have tested HIV positive
57. Who, among the following people, **DOES NOT** need any counseling when being tested for HIV?
- A. Lecturers
 - B. Nurses and Doctors
 - C. Any educated person
 - D. None of the above
58. Consequences of deprivation of basic human rights include the following EXCEPT _____
- A. Dependency on substance to cushion emotions.
 - B. Social isolation.
 - C. Feeling of self-esteem and self-worth
 - D. Feeling of being outcasts or second class citizen in their own societies

59. Which of the following describes basic empathy?
- A. An attempt to understand a client's world by "stepping into his/her shoes."
 - B. The ability to recognize & acknowledge feelings of a client without experiencing the same emotions.
 - C. An act of showing pity, condolence & compassion
 - D. A & B
60. A client requests for HIV counseling alone without testing. Based on your knowledge of HIV Testing and Counseling (HTC), which of the following would be the most appropriate thing to do?
- A. Counsel her and encourage her to come back for further counseling (with or without testing).
 - B. Explain the importance of testing and advise the client to come back when she is ready for both counseling and testing.
 - C. Counsel her until she accepts testing.
 - D. Do both counseling and testing and explain that the two should always go together.
61. Universal precautions include all of the following EXCEPT _____
- A. Careful handling and disposal of needles
 - B. Correct and consistent use of a condom when having sex
 - C. hand washing with soap and water before and after caring for an ill person
 - D. safe disposal of waste contaminated with blood or body fluids
62. Which of the following best describe the concept of counseling?
- A. A thorough assessment of a person's problems and solving them one by one.
 - B. Giving psychological support to a stressed person so as to make him/her stop thinking of the problems.
 - C. Facilitating the developing of an insight of unused or underused opportunities so as to enable wise and realistic decision making.
 - D. Teaching or lecturing to a stressed individual with the intention to relieve his/her stress.

63. The main goal of palliative care in HIV positive people is _____.
- Boosting immunity
 - Suppressing viral replication
 - Alleviating pain and suffering
 - A & B
64. Which of the following involves administration of ARV drugs for preventive purposes?
- Post-exposure prophylaxis
 - Prevention of mother to child transmission (PMTCT)
 - Highly active antiretroviral therapy (HAART)
 - Testing positive for HIV
- i & ii
 - i, ii & iii
 - iii & iv
 - i only
65. According to the current ART guidelines, who among the following is NOT eligible for pre-exposure prophylaxis?
- Commercial sex workers
 - A discordant couple
 - An 18 year old girl who has been raped
 - Adolescents who are sexually hyperactive
66. What happens in Swaziland after one is diagnosed of HIV with no other sign of illness?
- ART should be initiated immediately
 - CD 4 cell count is measured
 - Viral load is measured immediately
 - All of the above

Instruction: State whether each of the statements 67 – 75 is true (T) or false (F) and write the corresponding letter only in your answer booklet

67. Thrush or candida causes itching
68. Herpes has no cure
69. Condoms act as a barrier for heterosexual HIV transmission.

70. Circumcised males do not need to use a condom during sexual intercourse.
71. Adherence to the rules and regulation of reed dance (*umhlanga*) will reduce unwanted pregnancy and HIV infection among girls.
72. There is no need for counseling when testing children for HIV
73. Enforcement of cultural structure will mitigate the impact of orphans.
74. Opportunistic infections only infect people with HIV.
75. HIV is both sexually transmitted infection and an opportunistic infection

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UNIVERSITY OF ESWATINI
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DEPARTMENT OF GENERAL NURSING

GNS 113, MAIN EXAMINATION, NOVEMBER 2018.

ANSWER SHEET

Student's name: _____

Student's ID Number: _____

Date: _____

Exam Venue: _____

Seat No. _____

Instruction: Circle the correct answer; Cross to cancel

1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D
5.	A	B	C	D
6.	A	B	C	D
7.	A	B	C	D
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D
11.	A	B	C	D
12.	A	B	C	D
13.	A	B	C	D
14.	A	B	C	D
15.	A	B	C	D
16.	A	B	C	D
17.	A	B	C	D
18.	A	B	C	D
19.	A	B	C	D
20.	A	B	C	D
21.	A	B	C	D
22.	A	B	C	D
23.	A	B	C	D
24.	A	B	C	D
25.	A	B	C	D

26.	A	B	C	D
27.	A	B	C	D
28.	A	B	C	D
29.	A	B	C	D
30.	A	B	C	D
31.	A	B	C	D
32.	A	B	C	D
33.	A	B	C	D
34.	A	B	C	D
35.	A	B	C	D
36.	A	B	C	D
37.	A	B	C	D
38.	A	B	C	D
39.	A	B	C	D
40.	A	B	C	D
41.	A	B	C	D
42.	A	B	C	D
43.	A	B	C	D
44.	A	B	C	D
45.	A	B	C	D
46.	A	B	C	D
47.	A	B	C	D
48.	A	B	C	D
49.	A	B	C	D
50.	A	B	C	D

51.	A	B	C	D
52.	A	B	C	D
53.	A	B	C	D
54.	A	B	C	D
55.	A	B	C	D
56.	A	B	C	D
57.	A	B	C	D
58.	A	B	C	D
59.	A	B	C	D
60.	A	B	C	D
61.	A	B	C	D
62.	A	B	C	D
63.	A	B	C	D
64.	A	B	C	D
65.	A	B	C	D
66.	A	B	C	D
67.	T	F		
68.	T	F		
69.	T	F		
70.	T	F		
71.	T	F		
72.	T	F		
73.	T	F		
74.	T	F		
75.	T	F		

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1st SEM. 2018/19



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UNIVERSITY OF ESWATINI
FINAL EXAMINATION PAPER

PROGRAMME: BSc. in Agricultural & Biosystems Engineering Year I
BSc. in Agricultural Economics and Agribusiness
Management Year I
BSc. in Agricultural Education Year I
BSc. in Agricultural Extension Year I
BSc. in Agronomy Year I
BSc. in Animal Science Year I
BSc. in Animal Science Dairy Year I
BSc. in Food Science, Nutrition and Technology Year I
BSc. in consumer science Year I
BSc. in Consumer sciences Education Year I
BSc. in Horticulture Year I
BSc. in Textiles Apparel Design and Management Year I

COURSE CODE: AEM 101

TITLE OF PAPER: MATHEMATICS

TIME ALLOWED: 2:00 HOURS

INSTRUCTION: ANSWER ALL QUESTIONS

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1st SEM. 2018 /2019

Page 2 of 3

Question 1. (25 points)

1.1 Simplify $\frac{2}{x+1} + \frac{2x-1}{(x+1)(x+2)} + \frac{5}{x+2}$

(8 points)

1.2 Factorize $\frac{m^2}{4} + \frac{m}{3} + \frac{1}{9}$

(8 points)

1.3 Calculate the Cost price when:

- a) selling price is E250.00 and profit per cent is 10%.
- b) selling price is E550.00 and profit per cent is 400%.

(9 points)

Question 2 (25 points)

2.1 Solve the simultaneous equations

$$3x+4y=0$$

$$2x-2y=7$$

2.2 simplify $\frac{3}{x+1} + \frac{2x-1}{(x+1)(x+2)} - \frac{2}{x+2}$

(8 points)

(8 points)

2.3. Solve the equation $\frac{2x}{15} - \frac{x-6}{12} - \frac{3x}{20} = \frac{3}{2}$

(9 points)

Question 3 (25 points)

3.1 Find the maximum and minimum values of $y = x^3 - 3x^2 + 4$

(10 points)

3.2 Solve the following logarithmic equations

a) $2\log_4 x = \log_4^{2x^2-4}$.

b) $\log_3^{x^2+2} = 1 + \log_3^{x+2}$

(15 points)

Question 4 (25 points)

4.1 Differentiate the following:

a) $y = 4x^3 - 8x + 9$

b) $y = \sqrt{x} + \frac{1}{\sqrt{x}}$

(8 points)

4.2 Given that $y = 2x^3 - 3x^2 - 12x + 1$, calculate

a) the gradient of the tangent to the curve of y at the point where $x = 3$;

b) the value of x for which y has its maximum value;

c) the value of x for which y has its minimum value.

(9 points)

4.3. Evaluate $\int_0^1 2x^2 + 3x - 5 \, dx$

(8 points)

END OF PAPER