

UNIVERSITY OF BOLTON

FACULTY OF HEALTH AND WELLBEING

**FdSc FOUNDATION DEGREE NURSING ASSOCIATE
HIGHER APPRENTICESHIP PROGRAMME**

SEMESTER TWO EXAMINATION 2018/2019

**APPLICATION OF CORE KNOWLEDGE AND SKILLS
FOR THE NURSING ASSOCIATE**

MODULE NO: NRS4003

Date: Wednesday 27 March 2019

Time: 9.30 am – 11.30 am

INSTRUCTIONS TO CANDIDATES:

There are 60 questions.

Answer ALL 60 questions.

1 mark will be awarded for each question.

There are a total of 60 marks available.

The pass mark is 40%

You are permitted to use a calculator.

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Section 1.

Medication drug calculation questions- Answer all 10 questions

- 1) A patient is prescribed 160mg of a drug, the tablets are 40mg each, how many tablets will you administer?
 - a) 1 tablet
 - b) 3 tablets
 - c) 4 tablets
 - d) 2 tablets

- 2) Convert a dose of 740 millilitres (ml) into litres (l). Which is the correct answer?
 - a) 74 Litres
 - b) 0.74 Litres
 - c) 7.4 Litres
 - d) 0.074 Litres

- 3) Convert 250mg to grams:
 - a) 0.025 grams
 - b) 2.5 grams
 - c) 0.25 grams
 - d) 25 grams

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- 4) Your patient is prescribed erythromycin 500mg. You only have access to erythromycin 250 mg tablets. How many tablets would you need to dispense to your patient?
- a) 1 tablet
 - b) 2 tablets
 - c) 4 tablets
 - d) 3 tablets
- 5) Your patient requires a dose of 60 units/kg of drug D. Your patient weighs 60kgs. What dose of Drug D do you need to give?
- a) 300 units
 - b) 30 units
 - c) 2500 units
 - d) 3600 units
- 6) Patient S has been prescribed 200 mgs of drug J, in the form of a syrup. The concentration of the syrup is 50 mgs in 5 mls. How many mls would you administer to patient S?
- a) 10 mls
 - b) 5 mls
 - c) 20 mls
 - d) 15 mls

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- 7) A 6 year old child has suspected meningitis and is prescribed intravenous Benzylpenicillin 50mg/kg every four hours. If the child weighs 25 kg what dose of the medication should be prescribed by the doctor?
- a) 750 mg
 - b) 1250 mg
 - c) 2g
 - d) 800 mg
- 8) You are required to convert 450 micrograms to mg. Which is the correct answer?
- a) 0.045 mgs
 - b) 0.45 mgs
 - c) 4.50 mgs
 - d) 45.0 mgs
- 9) Your patient has been prescribed 875mg of drug X every 12 hours. What is the daily dose, in grams?
- a) 175 g
 - b) 1.75g
 - c) 1750 g
 - d) 0.175g

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- 10) You have an order to give 75mg of Drug X. It comes in 50mg tablets. How many tablets are you going to administer?
- a) 2 Tablets
 - b) 3 Tablets
 - c) 1.5 Tablets
 - d) 1 Tablets

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PAST EXAMINATION PAPER

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Section 2.

Medication administration questions – Answer all 5 questions

- 11) What does the term POM standards for?
- a) Prescriptions Of Medicines
 - b) Prescribing Of Medicines
 - c) Prescription Only Medication
 - d) Prescription On Medicines
- 12) Which of the following statement is **NOT** correct regarding the Misuse of Drugs Act, 1971?
- a) Give power to prescribers to do whatever they wish
 - b) Outlines restrictions in relation to controlled drugs
 - c) Control mechanisms for regulating the misuse of controlled drugs
 - d) Restricts production and supply of controlled drugs
- 13) Pharmacists may place stickers on pharmacy labels to:
- a) Indicate the price of the drug
 - b) Provide special instructions about the use of the drug
 - c) Indicate the name of the pharmacist that filled the prescription
 - d) Indicate the name of the prescriber

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- 14) If a patient is having trouble swallowing an oral medication, the Nursing Associate must:
- a) Crush the medication
 - b) Check with the RN to determine if there is another form of the medication for the patient that would be easier to swallow
 - c) Dissolve the medication in water
 - d) Omit the medication
- 15) If a patient refuses to take their medication in the first instance the Nursing Associate must:
- a) Inform the Registered Nurse
 - b) Contact the patient's next of kin and ask them to come in and ask the patient to take it
 - c) Inform the patient they do not have a choice and must take it as it is a prescribed drug
 - d) Speak to the patient to determine why they will not take it

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Section 3.

Anatomy and physiology – Answer all 45 Questions

- 16) Which of the following is NOT a structure of the heart?
- a) Carina
 - b) Left ventricle
 - c) Right atrium
 - d) Mitral valve
- 17) Which of the examples given below is NOT a valve of the heart?
- a) Tricuspid
 - b) Bicuspid
 - c) Aortic
 - d) Renal
- 18) Which sentence best describes arteries?
- a) They mostly take oxygenated blood away from the heart
 - b) They mostly take deoxygenated blood to the heart
 - c) They mostly have thin walls
 - d) They mostly take deoxygenated blood away from the heart

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- 19) Which sentence best describes veins?
- a) They mostly take oxygenated blood away from the heart
 - b) They mostly take deoxygenated blood to the heart
 - c) They are mainly muscular tubes
 - d) They mostly take oxygenated bloody to the heart
- 20) What is the function of the cell nucleus?
- a) It contains chromosomes and is the cells control centre
 - b) Storage of glycogen
 - c) Supports organelles
 - d) Packages proteins for secretion
- 21) The 'small organs' of the cell are called:
- a) Organelles
 - b) Organs
 - c) Tissues
 - d) Systems

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- 22) Motor neurones:
- a) Transmit messages from motor nerves to sensory nerves
 - b) Transmit messages from the sense receptors to the coordinator
 - c) Transmit messages from the coordinator to the brain
 - d) Transmit messages from the brain or spinal cord to a muscle or gland
- 23) Sensory neurones:
- a) Convert external stimuli into internal electrical impulses
 - b) Transmit messages from the coordinator to the brain
 - c) Convert internal impulses to external stimuli
 - d) Transmit messages from the coordinator to the effector
- 24) Which of the following are components of a nerve cell?
- a) Nucleus, dendrite, node of Ranvier, pons
 - b) Dendrite, Nucleus, Myelin Sheath, Node of Ranvier
 - c) Dendrite, node of Ranvier, myelin sheath, pons
 - d) Pons, dendrite, myelin sheath, node of Ranvier

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- 25) What is the main function of the nervous system?
- a) To ensure reproduction and survival of the species
 - b) To maintain fluid balance
 - c) To ensure oxygen is delivered around the body
 - d) To respond to changes in your surroundings (stimuli) and coordinate the correct response
- 26) The epidermis:
- a) Is composed of keratinised stratified squamous epithelium
 - b) Is composed of areolar and adipose tissue
 - c) Lines the walls of hollow cavities
 - d) Makes up most of the heart
- 27) The hypodermis:
- a) Is composed of keratinised stratified squamous epithelium
 - b) Is mainly composed of areolar and adipose tissue
 - c) The dermis is attached to the sub-cutaneous layer which anchors the skin and other organs of the body.
 - d) Makes up much of the heart
- 28) A category 3 pressure ulcer is identified when:
- a) There is full thickness skin loss. Subcutaneous fat may be visible but bone, tendon and muscle are not exposed
 - b) There is redness on the skin which is non-blanching
 - c) There is a small amount black tissue present on a part of the wound
 - d) There is partial thickness skin loss involving epidermis, dermis or both

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- 29) Epithelial tissue can be found:
- a) Lining the gastro intestinal tract, hollow organs and on skin surface
 - b) In the brain and spinal chord
 - c) In the cardiac muscle, smooth muscle and skeletal muscle
 - d) Surrounding bone and tendons
- 30) What are the 2 main components of the digestive system?
- a) Alimentary canal and accessory organs
 - b) Appendicular and axial tracts
 - c) Alimentary canal and appendicular organs
 - d) The mouth and anus
- 31) The 3 main functions of the digestive system are?
- a) Filtration, absorption and elimination
 - b) Filtration, digestion and elimination
 - c) Digestion, absorption and elimination
 - d) Respiration, absorption and elimination

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- 32) The pancreas is responsible for the secretion of:
- a) Bile and bile salts
 - b) Insulin and glucagon
 - c) Insulin and bile
 - d) Glucagon and bile
- 33) Which of the sentences below best describes mechanical digestion?
- a) Using digestive enzymes to break down food
 - b) Ripping and tearing up food with the teeth
 - c) Making food into a bolus in the mouth ready for swallowing
 - d) The churning of food within the stomach
- 34) A definition of internal respiration is:
- a) External air is drawn into the body in order to supply the lungs with oxygen, and air is expelled from the lungs in order to remove carbon dioxide from to body
 - b) The movement of air in and out of the lungs
 - c) The normal breathing pattern of a healthy person
 - d) The diffusion of oxygen from the blood into tissue cells and diffusion of carbon dioxide in the opposite direction

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- 35) Name a muscle that may be involved with breathing:
- a) Bicep
 - b) Femur
 - c) Deltoid
 - d) Diaphragm
- 36) Which one of these structures is not a component of the lower respiratory tract?
- a) Trachea
 - b) Larynx
 - c) Bronchiole
 - d) Alveoli
- 37) Pulmonary ventilation is:
- a) The exchange of oxygen for carbon dioxide within the lungs
 - b) The movement of air in and out of the lungs
 - c) The transport of oxygen to the tissues within the body
 - d) The rate at which a person breathes
- 38) What is one of the functions of the vagina?
- a) To provide sexual stimulation
 - b) To protect the inner, more sensitive structures of the vulva
 - c) To store oocytes
 - d) To maintain an acidic environment to prevent the growth of bacteria

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- 39) What is the main function of the testes?
- a) A passage way for ejaculated semen and the excretion of urine
 - b) To produce sperm
 - c) It is where sperm motility is increased
 - d) Transportation of sperm to the urethra
- 40) The male gonads are called:
- a) The testes
 - b) The Vas Deferens
 - c) The epididymis
 - d) The prostate gland
- 41) What is the main function of the ovaries?
- a) To provide sexual stimulation
 - b) To protect the inner, more sensitive structures of the vulva
 - c) To produce oocytes
 - d) To maintain an acidic environment to prevent the growth of bacteria
- 42) The study of the structure of the body and its parts:
- a) Physiology
 - b) Pathology
 - c) Anatomy
 - d) Homeostasis

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- 43) The term physiology can be defined as:
- a) The study of how the parts of the body work and the ways in which they co-operate together to maintain life and health of the individual
 - b) The study of the body and the physical relationships between body parts
 - c) The study of abnormalities and how they affect body functions, often causing illness
 - d) The study of life
- 44) The term idiopathic refers to:
- a) The likely outcome of a disease
 - b) The cause of the disease
 - c) The likely outcome of a disease
 - d) A disease or condition of which the cause is unknown
- 45) Homeostasis is:
- a) The study of how the parts of the body work and the ways in which they co-operate together to maintain life and health of the individual
 - b) A self-regulating process necessary to maintain the normal state of the body's environment
 - c) The study of abnormalities and how they affect body functions, often causing illness
 - d) The body's ability to heal wounds

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- 46) What is the function of the cell nucleus?
- a) It contains chromosomes and is the cells control centre
 - b) Storage of glycogen
 - c) Supports organelles
 - d) Packages proteins for secretion
- 47) What is cytoplasm?
- a) A viscous, translucent, watery material. It contains a large percentage of water, inorganic ions and naturally occurring organic compounds. Its main function is to support organelles
 - b) It is the gate keeper of the cell. It serves as the cells external boundary, separating it from other cells and from the external environment
 - c) The cells control centre. It plays a role in cell growth, metabolism & reproduction. It contains chromosomes, which control cellular activity & direct protein synthesis through ribosomes in the cytoplasm
 - d) It is the part of the cell that moves fluid or particles over the surface of the cell
- 48) Which of the following is NOT a function of the cell nucleus?
- a) Regulates metabolism
 - b) Store genetic materials
 - c) Protein synthesis
 - d) Stores carbohydrates

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- 49) Which organelle packages the energy from the food you eat into ATP molecules?
- a) Chloroplast
 - b) Golgi complex
 - c) Vacuole
 - d) Mitochondria
- 50) Which of the following is NOT a function of the kidney?
- a) Secretion of hormones
 - b) Maintenance of homeostasis
 - c) Production of white blood cells
 - d) Excretion of urea
- 51) The breakdown of proteins results in the formation of which substance?
- a) Glucose
 - b) Nitrogen
 - c) Sodium
 - d) Urea
- 52) One of the main functions of the kidney is to:
- a) Metabolise vitamins
 - b) Maintain fluid balance
 - c) Eliminate oxygen
 - d) Eliminate carbon dioxide

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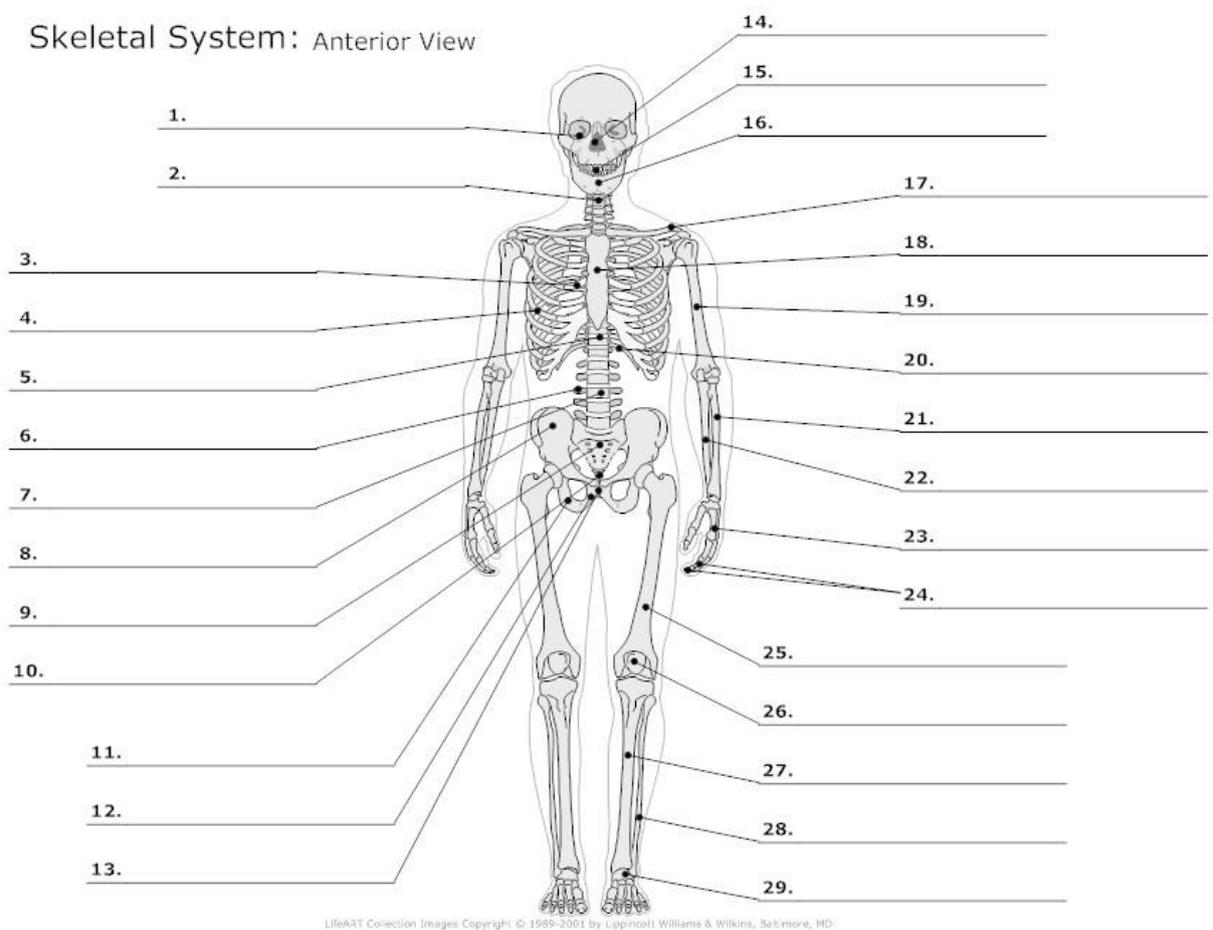
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- 53) Ultrafiltration takes occurs in which part of the nephron?
- a) The descending loop of Henle
 - b) The ascending loop of Henle
 - c) The Bowman's capsule
 - d) The collecting duct
- 54) The three basic types of muscle are:
- a) Skeletal, cardiac and smooth
 - b) Skeletal, thoracic and smooth
 - c) Smooth, endothelial and cardiac
 - d) Smooth, skeletal and endothelial
- 55) Skeletal muscle is:
- a) Striated with one nucleus
 - b) Striated with no nucleus
 - c) Non- striated with one nucleus
 - d) Striated with multiple nuclei

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- 56) On the diagram below the bone labelled 25 is:
- a) The femur
 - b) The tibia
 - c) The radius
 - d) The ulna



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- 57) On the diagram under Question 56, the bones labelled 24 are:
- a) The meta-carpels
 - b) The meta-tarsals
 - c) The phalanges
 - d) The carpals
- 58) Which of the explanations below best describes cardiac muscle?
- a) Has spindle shaped cells with a single nucleus and acts involuntarily
 - b) Has striations, branches and acts involuntary
 - c) Has striations, is normally attached to tendons and acts voluntarily
 - d) Is multi-nucleated, has spindle shaped cells and acts voluntarily
- 59) Which of the following is NOT a function of a muscle?
- a) Producing movement
 - b) Maintaining posture
 - c) Circulation
 - d) Heat generation
- 60) In the body, there are approximately 650:
- a) Bones
 - b) Ligaments
 - c) Tendons
 - d) Skeletal muscles

END OF QUESTIONS