TEST BANK FOR NURSING STUDENTS

SIMPLE CHOICES

FOUR POSSIBLE ANSWERS BELONG TO EVERY QUESTION. SELECT AND MARK THE ONLY CORRECT ANSWER ON THE CUMMULATIVE SHEET!

1. A patient about to undergo abdominal inspection is best placed in which of the following positions?

   A. Trendelenburg
   B. Supine
   C. Prone
   D. Side-lying

2. High-pitched gurgles head over the right lower quadrant are:

   A. A sign of increased bowel motility
   B. A sign of decreased bowel motility
   C. Normal bowel motility
   D. A sign of abdominal cramping

3. If a patient's blood pressure is 150/96, his pulse pressure is:

   A. 54
   B. 96
   C. 150
   D. 246

4. In Maslow's hierarchy of physiologic needs, the human need of greatest priority is:

   A. Love
   B. Nutrition
   C. Oxygen
   D. Elimination

5. A registered nurse reaches to answer the telephone on a busy pediatric unit, momentarily turning away from a 3 month-old infant she has been weighing. The infant falls off the scale, suffering a skull fracture. The nurse could be charged with:

   A. Defamation
   B. Assault
   C. Battery
   D. Malpractice

6. The family of an accident victim who has been declared brain-dead seems amenable to organ donation. What should the nurse do?

   A. Discourage them from making a decision until their grief has eased
   B. Listen to their concerns and answers their questions honestly
   C. Encourage them to sign the consent form right away
   D. Tell them the body will not be avaible for a wake or funeral

7. The physician orders a platelet count to be performed on Mrs. Smith after breakfast. The nurse is responsible for:

   A. Instructing the patient about this diagnostic test
   B. Writing the order for this test
   C. Giving the patient breakfast
   D. All of the above

8. For a rectal examination, the patient can be directed to assume which of the following positions?

   A. Genupectoral
   B. Sims
   C. Horizontal recumbent
   D. All of the above

9. The most appropriate nursing order for a patient who develops dyspnea and shortness of breath would be…

   A. Maintain the patient on strict bed rest at all times
   B. **Maintain the patient in an orthopneic position as needed**
   C. Administer oxygen by Venturi mask at 24%, as needed
   D. Allow a 1 hour rest period between activities

10. A patient is kept off food and fluids for 10 hours before surgery. His oral temperature at 8 a.m. is 99.8 F (37.7 C) This temperature reading probably indicates:

   A. Anxiety
   B. Infection
   C. Hypothermia
   D. Dehydration

11. The nurse observes that Mr. Adams begins to have increased difficulty breathing. She elevates the head of the bed to the high Fowler position, which decreases his respiratory distress. The nurse documents this breathing as:

   A. Tachypnea
   B. Eupnea
   C. **Orthopnea**
   D. Hyperventilation

12. The correct sequence for assessing the abdomen is:

   A. Tympanic percussion, measurement of abdominal girth, and inspection
   B. Assessment of distention, tenderness, and discoloration around the umbilicus
   C. Percussions, palpation, and auscultation
   D. Auscultation, percussion, and palpation

13. The physician orders a maintenance dose of 5,000 units of subcutaneous heparin (an anticoagulant) daily. Nursing responsibilities for Mrs. Mitchell now include:

    A. Reviewing daily activated partial thromboplastin time (APTT) and prothrombin time
    B. Reporting an APTT above 45 seconds to the physician
    C. Assessing the patient for signs and symptoms of frank and occult bleeding
    D. **All of the above**

14. A 38-year old patient's vital signs at 8 a.m. are axillary temperature 99.6 F (37.6 C); pulse rate, 88; respiratory rate, 30. Which findings should be reported?
    A. Temperature only
    B. Respiratory rate only
    C. **Pulse rate and temperature**
    D. Temperature and respiratory rate

15. A patient is admitted to the hospital with complaints of nausea, vomiting, diarrhea, and severe abdominal pain. Which of the following would immediately alert the nurse that the patient has bleeding from the GI tract?

    A. Complete blood count
    B. Guaiac test
    C. Vital signs
    D. Abdominal girth

16. Which of the following parameters should be checked when assessing respirations?

    A. Rate
    B. Rhythm
    C. Symmetry
    D. All of the above

17. The most important nursing intervention to correct skin dryness is:

A. Avoid bathing the patient until the condition is remedied, and notify the physician
B. Ask the physician to refer the patient to a dermatologist, and suggest that the patient wear home-laundered sleepwear
C. Consult the dietitian about increasing the patient's fat intake, and take necessary measures to prevent infection
D. Encourage the patient to increase his fluid intake, use non-irritating soap when bathing the patient, and apply lotion to the involved areas

18. When bathing a patient's extremities, the nurse should use long, firm strokes from the distal to the proximal areas. This technique:

A. Provides an opportunity for skin assessment
B. Avoid undue strain on the nurse
C. Increases venous blood flow
D. Causes vasoconstriction and increases circulation

19. Vivid dreaming occurs in which stage of sleep?

A. Stage I non-REM
B. Rapid Eye Movements (REM) stage
C. Stage II non-REM
D. Delta stage

20. Nursing interventions that can help the patient to relax and sleep restfully include all of the following except:

A. Have the patient take a 30- to 60-minute nap in the afternoon
B. Turn on the television in the patient's room
C. Provide quiet music and interesting reading material
D. Massage the patient's back with long strokes

21. Restraints can be used for all of the following purposes except to:

A. Prevent a confused patient from removing tubes, such as feeding tubes, I.V. lines, and urinary catheters
B. Prevent a patient from falling out of bed or a chair
C. Discourage a patient from attempting to ambulate alone when he requires assistance for his safety
D. Prevent a patient from becoming confused or disoriented

22. Which of the following is the nurse's legal responsibility when applying restraints?

A. Document the patient's behavior
B. Document the type of restraint used
C. Obtain a written order from the physician except in an emergency, when the patient must be protected from injury to himself or others
D. **All of the above**

23. Kubler-Ross's five successive stages of death and dying are:

A. Anger, bargaining, denial, depression, acceptance
B. Denial, anger, depression, bargaining, acceptance
C. **Denial, anger, bargaining, depression, acceptance**
D. Bargaining, denial, anger, depression, acceptance

24. A terminally ill patient usually experiences all of the following feelings during the anger stage except:

A. Rage
B. Envy
C. **Numbness**
D. Resentment

25. Which of the following symptoms is the best indicator of imminent death?

A. A weak, slow pulse
B. Increased muscle tone
C. Fixed, dilated pupils
D. Slow, shallow respirations

26. To institute appropriate isolation precautions, the nurse must first know the:

A. Organism's mode of transmission
B. Organism's Gram-staining characteristics
C. Organism's susceptibility to antibiotics
D. Patient's susceptibility to the organism

27. Which is the correct procedure for collecting a sputum specimen for culture and sensitivity testing?

A. Have the patient place the specimen in a container and enclose the container in a plastic bag
B. Have the patient expectorate the sputum while the nurse holds the container
C. Have the patient expectorate the sputum into a sterile container
D. Offer the patient an antiseptic mouthwash just before he expectorate the sputum

28. An autoclave is used to sterilize hospital supplies because:

A. More articles can be sterilized at a time
B. Steam causes less damage to the materials
C. A lower temperature can be obtained
D. Pressurized steam penetrates the supplies better

29. After having an I.V. line in place for 72 hours, a patient complains of tenderness, burning, and swelling. Assessment of the I.V. site reveals that it is warm and erythematous. This usually indicates:

A. Infection
B. Infiltration
C. **Phlebitis**
D. Bleeding

30. To ensure homogenization when diluting powdered medication in a vial, the nurse should:

A. Shake the vial vigorously
B. Roll the vial gently between the palms
C. Invert the vial and let it stand for 1 minute
D. Do nothing after adding the solution to the vial

31. The physician's order reads "Administer 1 g cefazolin sodium (Ancef) in 150 ml of normal saline solution in 60 minutes." What is the flow rate if the drop factor is 10 gtt = 1 ml?

A. 25 ggt/minute
B. 37 ggt/minute
C. 50 ggt/minute
D. 60 ggt/minute

32. A patient must receive 50 units of Humulin regular insulin. The label reads 100 units = 1 ml. How many milliliters should the nurse administer?

A. 0.5 ml
B. 0.75 ml
C. 1 ml
D. 2 ml

33. A patient has just received 30 mg of codeine by mouth for pain. Five minutes later he vomits. What should the nurse do first?

A. Call the physician
B. Remedicate the patient
C. Observe the emesis
D. Explain to the patient that she can do nothing to help him

34. A patient is characterized with a #16 indwelling urinary (Foley) catheter to determine if:

A. Trauma has happened
B. His 24-hour output is adequate
C. He has a urinary tract infection
D. Residual urine remains in the bladder after voiding

35. When examining a patient with abdominal pain the nurse in charge should assess:

A. Any quadrant first
B. The symptomatic quadrant first
C. The symptomatic quadrant last
D. The symptomatic quadrant either second or third

36. The nurse is assessing a postoperative adult patient. Which of the following should the nurse document as subjective data?

A. Vital signs
B. Laboratory test result
C. Patient's description of pain
D. ECG wave

37. A male patient has a soft wrist-safety device. Which assessment finding should the nurse consider abnormal?

A. A palpable radial pulse
B. A palpable ulnar pulse
C. Cool, pale fingers
D. Pink nail beds

38. A female patient with a terminal illness is in denial. Indicators of denial include:

A. Shock dismay
B. Numbness
C. Stoicism
D. Preparatory grief

39. The nurse in charge is transferring a patient from the bed to a chair. Which action does the nurse take during this patient transfer?

A. Position of the head of the bed flat
B. **Helps the patient dangle the legs**
C. Stands behind the patient
D. Places the chair facing away from the bed

40. Before administering the evening dose of a prescribed medication, the nurse on the evening shift finds an unlabeled, filled syringe in the patient's medication drawer. What should the nurse in charge do?

A. Discard the syringe to avoid a medication error
B. Obtain a label for the syringe from the pharmacy
C. Use the syringe because it looks like it contains the same medication the nurse was prepared to give
D. Call the day nurse to verify the contents of the syringe

41. When administering drug therapy to a male geriatric patient, the nurse must stay especially alert for adverse effects. Which factor makes geriatric patients to adverse drug effects?

A. Faster drug clearance
B. Aging-related physiological changes
C. Increased amount of neurons
D. Enhanced blood flow to the GI tract

42. The physician orders heparin, 7,500 units, to be administered subcutaneously every 6 hours. The vial reads 10,000 units per milliliter. The nurse should anticipate giving how much heparin for each dose?

A. ¼ ml
B. ½ ml
C. **¾ ml**
D. 1 ¼ ml

43. To evaluate a patient for hypoxia, the physician is most likely to order which laboratory test?

A. Red blood count cell
B. Sputum culture
C. Total hemoglobin
D. Arterial blood gas analysis

44. The physician prescribes 250 mg of a drug. The drug vial reads 500 mg/ml. how much of the drug should the nurse give?

A. 2 ml
B. 1 ml
C. ½ ml
D. ¼ ml

45. The Nurse is monitoring a patient for adverse reactions during barbiturate therapy. What is the major disadvantage of barbiturate use?

A. Prolonged half-life
B. Poor absorption
C. Potential for drug dependence
D. Potential for hepatotoxicity

46. Which nursing action is essential when providing continuous enteral feeding?

A. Elevating the head of the bed
B. Positioning the patient on the left side
C. Warming the formula before administering it
D. Hanging a full day's worth of formula at one time

47. When teaching a female patient how to take a sublingual tablet, the nurse should instruct the patient to place the table on the:

A. Top of the tongue
B. Roof of the tongue
C. Floor of the mouth
D. Inside of the cheek

48. Which action by the nurse in charge is essential when cleaning the area around a Jackson-Pratt wound drain?

A. Cleaning from the center outward in a circular motion
B. Removing the drain before cleaning the skin
C. Cleaning briskly around the site with alcohol
D. Wearing sterile gloves and a mask

49. The doctor orders dextrose 5% in water, 1,000 ml to be infused over 8 hours. The I.V. tubing delivers 15 drops per milliliter. The nurse in charge should run the I.V. infusion at a rate of:

A. 15 drop per minute
B. 21 drop per minute
C. 32 drop per minute
D. 121 drop per minute

50. A female patient undergoes a total abdominal hysterectomy. When assessing the patient 10 hours later, the nurse identifies which finding as an early sign of shock?

A. Restlessness
B. Pale, warm, dry skin
C. Heart rate of 110 beats/minute
D. Urine output of 30 ml/hour

51. Which pulse should the nurse palpate during rapid assessment of an unconscious male adult?

A. Radial
B. Brachial
C. Carotid
D. Femoral

52. A child who ingested 15 maximum strength acetaminophen tablets 45 minutes ago is seen in the emergency department. Which of these orders should the nurse do first?

A. Gastric lavage
B. Acetylcysteine (Mucomyst) for age per pharmacy
C. Start an IV Dextrose 5% with 0.33% normal saline to keep vein open
D. Activated charcoal per pharmacy

53. Which complication of cardiac catheterization should the nurse monitor for in the initial 24 hours after the procedure?

A. Angina at rest
B. Thrombus formation
C. Dizziness
D. Falling blood pressure

54. Which of the following should the nurse implement to prepare a client for a KUB (Kidney**,** Ureter, Bladder**)** radiograph test?

A. Client must be NPO before the examination
B. Enema to be administered prior to examination
C. Medicate client with Lasix 20 mg IV 30 minutes prior to the examination
D. No special orders are necessary for this examination

55. The nurse prepares the client for insertion of a pulmonary artery catheter (Swan-Ganz catheter). The nurse teaches the client that the catheter will be inserted to provide information about:

A. Stroke volume
B. Cardiac output
C. Venous pressure
D. Left ventricular functioning

56. A client comes to the clinic for treatment of recurrent pelvic inflammatory disease. The nurse recognizes that this condition most frequently follows which type of infection**?**

A. Trichomoniasis
B. Chlamydia
C. Staphylococcus
D. Streptococcus

57. What is the first step in the qualitative research process?

A. Data analysis
B. Sample
C. Review literature
D. Sample design

58. Which one of the following statements about hypotheses is most accurate?

A. Hypotheses represent the main idea to be studied and are the foundations of research studies.
B. Hypotheses help frame a test of the validity of a theory.
C. Hypotheses provide the means to test nursing theory.
D. A hypothesis can also be called a problem statement.

59. After the physician performs an amniotomy, the nurse's first action should be to assess the:

A. Degree of cervical dilation
B. Fetal heart tones
C. Client's vital signs
D. Client's level of discomfort

60. When assessing a laboring client, the nurse finds a prolapsed cord. The nurse should:

A. Attempt to replace the cord
B. Place the client on her left side
C. Elevate the client's hips
D. Cover the cord with a dry, sterile gauze

61. The elderly client is admitted to the emergency room. Which symptom is the client with a fractured hip most likely to exhibit?

A. Pain
B. Disalignment
C. Cool extremity
D. Absence of pedal pulses

62. The nurse is assessing the client with a total knee replacement 2 hours postoperative. Which information requires notification of the doctor?

A. Bleeding on the dressing is 3cm in diameter.
B. The client has a temperature of 100.6°F (38.1°C).
C. The client's hematocrit is 26%.
D. The urinary output has been 60 during the last 2 hours

63. A newborn with narcotic abstinence syndrome is admitted to the nursery. Nursing care of the newborn should include:

A. Teaching the mother to provide tactile stimulation
B. Wrapping the newborn snugly in a blanket
C. Placing the newborn in the infant seat
D. Initiating an early infant-stimulation program

64. George Kent is a 54 year old widower with a history of chronic obstructive pulmonary disease and was rushed to the emergency department with increasing shortness of breath, pyrexia, and a productive cough with yellow-green sputum. He has difficulty in communicating because of his inability to complete a sentence. One of his sons, Jacob, says he has been unwell for three days. Upon examination, crackles and wheezes can be heard in the lower lobes; he has a tachycardia and a bounding pulse. Measurement of arterial blood gas shows pH 7.3, $PaCO_2$ 68 mm Hg, HCO_3 28 mmol/L, and PaO_2 60 mm Hg. How would you interpret this?

A. Respiratory Acidosis, Uncompensated
B. Respiratory Acidosis, Partially Compensated
C. Metabolic Alkalosis, Uncompensated
D. Metabolic Acidosis, Partially Compensated

65. Mr. Wales, who underwent post-abdominal surgery, has a nasogastric tube. The nurse on duty notes that the nasogastric tube (NGT) is draining a large amount (900 cc in 2 hours) of coffee ground secretions. The client is not oriented to person, place, or time. The nurse contacts the attending physician and STAT ABGs are ordered. The results from the ABGs show pH 7.57, PaCO2 37 mmHg and HCO3 30 mmol/L. What is your assessment?

A. Metabolic Acidosis, Uncompensated
B. Metabolic Alkalosis, Uncompensated
C. Respiratory Alkalosis, Uncompensated
D. Metabolic Alkalosis, Partially Compensated

66. Three-year-old Adrian is admitted to the hospital with a diagnosis of asthma and respiratory distress syndrome. The mother of the child reports to the nurse on duty that she has witnessed slight tremors and behavioral changes in her child over the past four days. The attending physician orders routine ABGs following an assessment of the ABCs. The ABG results are pH 7.35, PaCO2 72 mmHg and HCO3 38 mEq/L. What acid-base disorder is shown?

A. Respiratory Acidosis, Uncompensated
B. Respiratory Acidosis, Fully Compensated
C. Respiratory Alkalosis, Fully Compensated
D. Metabolic Alkalosis, Partially Compensated

67. A patient who is hospitalized due to vomiting and a decreased level of consciousness displays slow and deep (Kussmaul breathing), and he is lethargic and irritable in response to stimulation. The doctor diagnosed him of having dehydration. Measurement of arterial blood gas shows pH 7.0, PaO2 90 mm Hg, PaCO2 22 mm Hg, and HCO3 14 mmol/L; other results are Na+ 120 mmol/L, K+ 2.5 mmol/L, and Cl- 95 mmol/L. As a knowledgeable nurse, you know that the normal value for PaCO2 is:

A. 22 mm Hg
B. 36 mm Hg
C. 48 mm Hg
D. 50 mm Hg

68. A mountaineer attempts an assault on a high mountain in the Andes and reaches an altitude of 5000 meters (16,400 ft) above sea level. What will happen to his arterial PCO2 and pH?

A. Both will be lower than normal.
B. The pH will rise and PCO2 will fall.
C. Both will be higher than normal due to the physical exertion.
D. The pH will fall and PCO2 will rise.

69. A mother is admitted in the emergency department following complaints of fever and chills. The nurse on duty took her vital signs and noted the following: Temp = 100 °F; apical pulse = 95; respiration = 20 and deep. Measurement of arterial blood gas shows pH 7.37, PaO2 90 mm Hg, PaCO2 40 mm Hg, and HCO3 24 mmol/L. What is your assessment?

A. Hyperthermia
B. Hyperthermia and Respiratory Alkalosis
C. Hypothermia
D. Hypothermia and Respiratory Alkalosis

70. What two organs in the body serve as a compensatory function to maintain acid base balance?

A. Kidneys and Lungs
B. Lungs and Spleen
C. Heart and Liver
D. Gallbladder and Appendix

71. What kind of epithel lines the wall of the oesophagus?

A. Multiple layered hornifying squamous
B. Multiple layered non-hornifying squamous epithel
C. Simple squamous epithel
D. Multiple layered cuboid epithel

72. In which formula can collagen fibrous cartilage be found?

A. Outer ear
B. Symphysis
C. Trachea
D. Epiglottis

73. What is covering the heart from outside?

A. Endocardium
B. Myocardium
C. Pericardium
D. Intracardium

74. Which bone belongs to the cranial group of the skull?

A. Lacrimal bone / os lacrimale
B. Ethmoidal bone / os ethmoidale
C. Nasal bone / os nasale
D. Zygomatic bone / os zygomaticum

75. Which of these muscles is NOT belong to the back region?

A. Trapezius muscle
B. Levator scapulae
C. Latissimus dorsi
D. Transversus abdominis

76. Which of the following muscles has the function of chewing or grounding?

A. Frontal muscle
B. Buccinators
C. Masseter
D. Occipital muscle

77. Direct branch from the Aorta:

A. Bronchial arteries
B. Left subclavian artery / a. subclavia sinistra
C. Right coronary artery / a. coronaria dextra
D. Vertebral artery / a. vertebralis

78. Starting point of the pulmonar circulatory loop:

A. Left atrium / atrium sinistrum
B. Right atrium / atrium dextrum
C. Right ventricle / ventriculus dexter
D. Left ventricle / ventriculus sinister

79. Which of these layers of the heart wall helps forming the valves?

A. Endocardium
B. Endometrium
C. Tunica adventitia
D. Tunica media

80. What does ’collateral circulation’ mean?

A. Double capillarisation
B. Short circuit between an artery and a vein
C. Communication avoiding capillary system between artery-artery or vein-vein
D. Semilunar valves conduct blood flow towards the heart

81. Renal circulation’s characteristic:

A. Renal artery spawns from the thoracic aorta
B. Double capillarisation
C. Renal vein steps out at the lower pole of the kidney
D. Belongs to the portal circulation

82. Where is the tricuspid valve?

A. At the start of the pulmonary trunk
B. At the right atrioventricular branch
C. At the starting tract of the aorta
D. At the left atrioventricular branch

83. Which of these muscles make flexion in the elbow joint?

A. M. deltoideus
B. M. biceps brachii
C. M. psoas major
D. M. erector trunci

84. Merocrin secretion's feature:

A. Part of the glandular cell transforms to secretum
B. Cells produce and eject secretum without changing
C. The whole cell is fading to become the secretum
D. Glandular cells' terminal products get to the blood circulation

85. What kind of tissue can we found in the wall of the oral cavity?

A. Simple cuboid epithelium
B. Simple squamous epithelium
C. Urothelium
D. Stratified squamous epithelium

86. Which is the second branch from the arch of aorta?

A. Brachiocephalic trunk
B. Right subclavian artery
C. Right common carotid artery
D. Left common carotid artery

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87. Which is NOT in the mediastinum?

A. Right lung
B. Main thoracic lymhatic trunk
C. Heart
D. Thymus

88. Nasolacrimal duct's feature:

A. A sinus of the maxilla
B. Situated in the body of the sphenoid bone and communicates with the posterior part of the nasal cavity
C. Can be found in the squamous part of the frontal bone
D. Leads to the lower nasal concha, transfers tear to the nasal cavity

89. Which of the following metabolic process occurs in mitocondria?

A. Glycolysis
B. Calvin cycle
C. Nuclein acid synthesis
D. Oxidative phosphorilation

90. What kind of monomers build up cellulose?

A. Thousands of nuclein acids
B. Thousands of glucose molecules
C. Thousands of amino acids
D. T
E. Thousands of lipid molecules

91. The pairing between complementary nucleotide bases in DNA is stabilized by:

A. Noncovalent bonds
B. Disulfide bonds
C. Cytosine bonds
D. Peptide bonds

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92. Amino acids are bonded in proteins with:

A. Esther bond
B. Glycosidic bond
C. Hydrogen bond
D. Peptide bond

93. Simple lipids are:

A. Esters of fatty acids with various alcohols
B. Esters of fatty acids, an alcohol and phosphoric acid residue
C. Lipids containing a fatty acid, sphingosine, and carbohydrate
D. Esters of lipoproteins with various alcohols

94. Which base can be found only in DNA?

A. Guanine
B. Cytosine
C. Thymine
D. Adenine

95. Enzymes are:

A. Lipids
B. Proteins
C. Polysaccharides
D. Polynucleotides

96. The covalent bond can be characterized as…

A. A strong attractive forces between atoms when they shares electrons
B. The attraction of a positively charged ion for a negatively charged ion
C. Interaction of a partially positively charged hydrogen atom in a molecular dipole
D. A weak attractive forces between atoms

97. Endergonic reactions are…

A. Chemical reactions without energy state change
B. Chemical reactions that releases energy
C. Cellular respiration
D. Chemical reaction that requires a net input of energy

98. Glycolisis is:

A. The metabolic pathway that converts glucose into citric acid
B. The metabolic pathway that converts glucose into pyruvate
C. The metabolic pathway that converts glucose into fatty acid
D. The metabolic pathway that converts glucose into CO_2

99. The efficient breakdown of glycogen is to provide the following smaller molecules:

A. Acetyl-CoA
B. Fatty acids
C. Glucose 6-phosphate
D. ATP

100. Pentose phosphate pathway is…

A. A metabolic pathway that generates pentoses and phosphates
B. A metabolic pathway that generates NADH and amino acids
C. A metabolic pathway that generates NADPH and pentoses
D. A metabolic pathway that generates glucose and phosphates

101. The three main amino acid metabolism reactions are…

A. Deamination, transamination, urea formation
B. Glycosylation, hydrolysis, transamination
C. Phosphorylation, hydrolysis, urea formation
D. Deamination, transamination, peptide formation

102. Photosynthesis takes place in this organelle:

A. Lysosome
B. Golgi-body
C. Mitochondria
D. Chloroplast

103. A nucleotide consist of…

A. Base, protein, phosphate
B. Base, 6-carbon sugar, phosphate
C. Base, 5-carbon sugar, phosphate
D. Base, hexose, phoshate

104. Which one is true for cytoskeletal actin filaments?

A. They grow out from a centrosome near the nucleus
B. They have two isoforms
C. Solid rods of a globular protein
D. They are the central structural supports in cilia and flagella

105. True for the mitochondria:

A. Its inner material is plasma
B. Surrounds by a double membrane
C. Glycolisis takes place in it
D. It has thylacoids

106. What does NOT determine the rate of diffusion?

A. Enzyme activation energy
B. The surface area
C. Temperature
D. The steepness of the concentration gradient

107. Integrins are:

A. Singal transduction molecules
B. Enzymes
C. Cell adhesion molecules
D. Contractile cytoskeletal filaments

108. Which statement is true for the prokaryotic cell?

A. DNA is linear
B. It is enclosed by plasma membrane
C. Not protected by a cell wall
D. It has complex cytoskeletal support structure

109. Which statement is NOT true for resting membrane potential?

A. Separation of charges is what causes the membrane potential
B. Membrane potential is made by the sodium-potassium pump
C. Exists because ions are concentrated on different sides of the membrane
D. Na^+ and Cl^- located inside the cell

110. Main components of plasma membranes are:

A. Phospholipids, amino acids
B. Phospholipids, peptides
C. Phospholipids, water
D. Phospholipids, proteins

111. Which statement is true for the endoplasmic reticulum?

A. One of its type can be attached closest to the nucleus
B. Place of the lipid synthesis
C. It can bind lysosomes on its surface
D. Granular ER is a morphological type of endoplasmic reticulum

112. What happens in interphase of the cell cycle?

A. Cell splits into daughter cells
B. Chromosomes lined at the equator
C. Sister chromatids being separated
D. DNA replication

113. Lipid layer in the middle of the membrane is impermeable for:

A. Fat soluble substances
B. O_2
C. Ions
D. CO_2

114. Extracellular fluid materials enter the cell by this process:

A. Diffusion
B. Pinocytosis
C. Osmosis
D. Facilitated transport

115. What is the main role of Golgi apparatus?

A. Phospholipid synthesis
B. ATP production
C. Protein synthesis
D. Modification of proteins by the addition of sugars

116. A hypertonic solution:

A. One solution has a lower concentration of solute than another
B. One solution has a higher concentration of solute than another
C. One solution has same concentration of solute than another
D. When there is no net movement of molecules from either side

117. Which enzyme does unwind the DNA molecule during DNA replication?

A. Helicase
B. DNA polymerase
C. Single-stranded DNA binding proteins
D. Primase

118. What does the proofreading function of DNA polymerase mean?

A. The enzyme completes chain synthesis between Okazaki fragments
B. The enzyme can start the DNA replication on both strands
C. The enzyme identifies copying errors and corrects them
D. The enzyme can copy the DNA in both direction

119. Legionellosis is caused by:

A. Streptococcus pneumoniae
B. Streptococcus pyogenes
C. Legionella pneumophila
D. Legionella erythra

120. Caused by protozoa:

A. Strongyloidosis
B. Schistosomiosis
C. Both
D. None of them

121. Gase gangrene is caused by:

A. Staphylococcus aureus
B. Streptococcus pyogenes
C. Clostridium perfringens
D. Borrelia burgdorferi

122. Which bacteria is transmitted with louse?

A. Salmonella
B. E. coli
C. Rikettsia
D. Borrelia

123. Scarlat fever is caused by:

A. Streptococcus pneumoniae
B. Streptococcus pyogenes
C. Influenza virus
D. Haemophilus influenzae b

124. Trichomonas vaginalis is:

A. Virus
B. Bacteria
C. Protozoon
D. Fungus

125. Syphilis is caused by:

A. Corynebacterium dyphtheriae
B. Treponema pallidum vs pallidum
C. Candida albicans
D. Bordatella pertussis

126. Which of the followings is with viral origin?

A. Herpes
B. Syphilis
C. Candidosis
D. Gonorrhea

127. Chagas disease is caused by:

A. Toxoplasma gondii
B. Plasmodium
C. Trypanosoma cruzi
D. Round worm

128. Men can be infected by *Giardia lamblia* with:

A. Raw food stuffs
B. Well cooked foods
C. Blood
D. Saliva

129. Giardiasis is caused by:

A. Toxoplasma gondii
B. Entamoeba hystolitica
C. Gardia lamblia
D. Pinworm

130. Amoebic dysentary is caused by:

A. Toxoplasma gondii
B. Entamoeba hystolitica
C. Gardia lamblia
D. Pinworm

131. *Diphtheria* is caused by:

A. Varicella zoster
B. Mycobacterium tuberculosis
C. Clostridium tetani
D. Corynebacterium diphtheriae

132. What kind of microbe is *Haemophilus influenzae b*?

A. Virus
B. Bacteria
C. Protozoon
D. Fungus

133. Scarification is used to vaccination of:

A. Mumps
B. Smallpox
C. Both
D. None of them

134. Which of the followings is live attenuated vaccine?

A. Hepatitis B
B. Diphtheria
C. Rubella
D. Pertussis

135. Vaccines against *Variola* are:

A. Immunoglobulins
B. Live vaccines
C. Inactivated pathogens.
D. Toxoids

136. What is the definition of memory cells?

A. Cells of second line defense playing role in complement system
B. Macrophages with toll-like receptors
C. Cells derived from B or T lymphocytes that can quickly recognize a foreign antigen to which the body has been previously exposed
D. Cells opsonized microorganisms

137. Molecules of innate immune system:

A. Natural killer cells
B. B-cells
C. Both
D. None of them

138. Macrophages secret:

A. Immunoglobulins
B. Neutrophils
C. Cytokines
D. Mast cell

139. Autoantigens…

A. Are bacterial proteins and potent stimuli for T cells
B. Can occur in tissues (eye, thyroid gland, for example) that are walled off early in embryonic development before the surveillance system is in complete working order
C. Are cell surface markers and molecules that occur in some members of the same species but not in others
D. Immunoglobulin molecules

140. The definition of "antigen" is:

A. The ability of an organism to resist disease
B. The reaction to and interaction with substances interpreted by the body as not-self
C. Immune cells and organs
D. Any substance capable, under appropriate conditions, of inducing a specific immune response and reacting with the products of that response

141. Hydrogen-peroxide is used for disinfection of:

A. Wounds
B. Large surfaces
C. Skin
D. Air

142. Tincture and Iodofores are used for disinfection of:

A. Food stuffs
B. Large surfaces
C. Skin
D. Air

143. Bacteriophages infect:

A. Animals
B. Plants
C. Fungi
D. Bacteria

144. Which of the followings is Zoonosis?

A. Avian flu
B. Rabies
C. Both
D. None of them

145. Lipoplysaccharides can be found in:

A. Gram positive bacteria
B. Gram negative bacteria
C. Both
D. None of them

146. What is the blood type of a person who has H agglutinogen on his/her red blood cells?

A. Type A
B. Type B
C. Type AB
D. Type O

147. Name the enzyme that cuts fibrin into fibrin fragments.

A. Plasmin
B. Plasminogen
C. Thrombin
D. Fibrinogen

148. True for the facilitated diffusion:

A. Active transport mechanism
B. Transport mechanism of water through a semipermeable membrane
C. The filtration pressure forces the solute against its concentration gradient
D. The solute binds to a specific carrier membrane protein

149. The action potential is:

A. Fast changes in the potential of the two sides of the membrane
B. The polarized state of the cell membrane
C. The depolarized state of the cell membrane
D. Fast change of the resting membrane potential

150. Which is the most abundant plasma protein?

A. Alpha globulin
B. Beta globulin
C. Albumin
D. Fibrinogen

151. Bathmotropic effect means:

A. The conduction speed in the AV node
B. The force of the muscular contractions
C. The tone of the cardiac muscle in rest
D. The excitability of the cardiac muscle

152. What is not a physiological component of the filtrate in the tubular system?

A. Cl-
B. Albumin
C. Red blood cell
D. Glucose

153. True for the H+ pump (H+ATPase):

A. Requires energy
B. Passive transport
C. Defined by physico-chemical properties
D. Filtration process

154. What does eupnoe mean?

A. Normal breathing
B. Cessation of breathing
C. Difficult breathing
D. The name of the group of central chemoreceptors

155. Atmospheric pressure is around _____ mmHg:

A. 760
B. 500
C. 120
D. 250

156. What can cause acidosis?

A. Increased bicarbonate level in the blood
B. Decreased elimination of CO2
C. Significant H+ loss
D. Decreased CO2 tension

157. True for the glomerular filtrate:

A. Normally it contains white blood cells
B. Almost totally protein free
C. 10-20 liters are produced daily
D. ANP decreases the glomerular filtration rate (GFR)

158. Which of these can dissolve a blood clot?

A. Heparin
B. plasminogen
C. Plasmin
D. PDGF

159. In an ECG, where does the depolarization of the atria occur?

A. P wave
B. QRS complex
C. T wave
D. U wave

160. The pulmonary semilunar valve prevents back flow of blood into the _____:

A. Right atrium
B. Left atrium
C. Right ventricle
D. Left ventricle

161. True for passive transport:

A. Requires ATP
B. Transports materials down their electrochemical gradient
C. Performed by primary pumps
D. Na+/K+ ATPase belongs to this group

162. What is colloid osmotic pressure?

A. The pressure of flowing water
B. The hydrostatic pressure of the blood
C. The pressure of electrolytes in the blood
D. The pressure of large colloid molecules

163. True for albumin:

A. Provides 1/10 of the blood colloid osmotic pressure
B. Produced in the spleen
C. Important transport protein
D. Indispensible in the coagulation process

164. The percentage of blood cells in the whole blood is:

A. Plasma
B. Hematocrit
C. Erythrocyte
D. Serum

165. What converts fibrinogen to fibrin?

A. Prothrombin
B. Thrombin
C. Calcium
D. Thromboplastin

166. Which of the following has the highest cross-sectional area in the body?

A. Arteries
B. Arterioles
C. Capillaries
D. Veins

167. The functional gas exchanging units are called:

A. Lobules
B. Lobar areas
C. Alveoli
D. Bronchioles

168. What is the average glomerular filtration rate?

A. 10 l per day
B. 180 l per day
C. 1500 ml per day
D. 1 ml per day

169. The kidney secretes _____ which raises blood pressure.

A. Aldosterone
B. Renin
C. Angiotensinogen
D. Angiotensin II

170. What prevents the alveoli from collapsing during exhalation?

A. Surface tension
B. Cartilage
C. Surfactant
D. Pressure

171. True for vital capacity:

A. Residual volume and functional residual volume
B. Sum of tidal volume and expiratory reserve volume
C. Its volume is 2000 ml
D. Sum of the tidal volume, inspiratory reserve volume and expiratory reserve volume

172. True for salivary amylase:

A. Digests fat
B. Digests protein
C. Digests carbohydrate
D. Helps to lubricate food

173. The chief cells of the stomach produce:

A. Bicarbonate
B. Gastrin
C. Histamine
D. Pepsinogen

174. Which antibody can cross the placenta?

A. IgM
B. IgG
C. IgA
D. IgE

175. Which immunological component does not have phagocytic ability?

A. Macrophages
B. Follicular dendritic cells
C. Neutrophil granulocytes
D. Kupffer cells

176. Which one is a primary lymphoid tissue?

A. Thymus
B. Spleen
C. Lymph node
D. MALT

177. Which of these is NOT produced in the anterior pituitary?

A. Growth hormone
B. Prolactin
C. Oxytocin
D. TSH

178. True for calcitonin:

A. Has similar effect to parathyroid hormone
B. Increases the reabsorption of calcium in the nephron
C. Increases plasma calcium concentration
D. Increases calcium uptake by bones

179. Where is aldosterone produced?

A. Zona glomerulosa of the adrenal cortex
B. Zona fasciculata of the adrenal cortex
C. Zona reticularis of the adrenal cortex
D. Adrenal medulla

180. Which one is primarily a fructose transporter?

A. GLUT1
B. GLUT2
C. GLUT4
D. GLUT5

181. True for neurotransmitters:

A. Used at electrical synapses
B. Synthetised in the postsynaptic neuron
C. Localized in vesicles
D. Remain in the synaptic cleft

182. Which one is not true for the photoreceptors in dark?

A. Level of cGMP is high
B. The opening of the K-channels causes the release of transmitter
C. The transmitter causes graded potential in the bipolar cells
D. The opening of the Na-channels causes depolarization

183. Which taste can be detected at the back of the tongue?

A. Sweet
B. Sour
C. Bitter
D. Salty

184. It is characteristic for language and speech:

A. Language is a highly lateralized function of the brain residing in the right hemisphere
B. The Wernicke's area is essential for the mechanical production of speech
C. The Broca's area regulates movements of the muscles of the mouth, tongue, throat
D. Wernicke's area and Broca's area are totally separated from each other

185. True for motorneurons:

A. There are 3 types of motorneurons
B. Alfa motorneurons innervate intrafusal muscle fibers
C. Gamma motorneurons adjust the sensitivity of the muscle spindles
D. Gamma motorneurons innervate extrafusal muscle fibers

186. True for the sleep/wake cycles:

A. Cycle begins with rapid eye movement (REM) phase
B. There are 6 stages during a cycle
C. Stage 4 is reached at the end of about an hour when delta waves are observed
D. You can't be awaken during REM phase

187. During the contraction of a sarcomere, Ca ions bind to which protein?

A. Troponin C
B. Actin
C. Myosin
D. Tropomyosin

188. A muscle contraction in which the muscle produces an increasing tension, but the length remains constant:

A. Isotonic
B. Isometric
C. Concentric
D. Eccentric

189. Specific to hyperthermia:

A. Patient becomes unconscious below 32 degree
B. J-wave occurs at 34 degree
C. Muscle rigidity starts from 33 degree
D. ECG shows isoelectric line at 20 degree

190. Specific to somatic pain:

A. The pain is sharp and easily localized
B. Only the bodypart of the injury creates discomfort
C. Originates from nerves
D. Short duration

191. Which of the following statements is true for ’devices aiding mobility’?

A. Elbow crutches have a T-handle part
B. Rolling crutches are recommended for patients with poor mobility
C. Walking sticks are made of plastic
D. Rolling crutches do not have breaks

192. Which statement is true for hypertension?

A. Systolic value of increased- normal blood pressure is 130-139 mmHg
B. Systolic value of II. degree hypertension is 170-189 mmHg
C. Diastolic value of I. degree hypertension is 90-95 mmHg
D. Diastolic value of III. degree hypertension is above 100 mmHg

193. Specific to pills:

A. Made up of active ingredients
B. Used for oral intake only
C. Retard pills delay the discharge
D. Solid and liquid active ingredients

194. The physician prescribed 5.000 NU of Na-Heparine during morning visit. How many milliliters have to be administered?

A. 1 ml
B. 2 ml
C. 5 ml
D. 10 ml

195. Specific to Nosocomial Surveillance, EXCEPT:

A. Develops rules of procedure
B. Monitorize the nosocomial infections
C. Nosocomial infections' symptomes manifest 24 hours after admission
D. Sepsis has to be reported

196. Specific to parenteral solutions:

A. Bypass the first pass
B. Advantage is that there is no overdosing
C. Used in an external way
D. Oily solutions are given subcutaneously

197. The time of the closing of the anterior fontanel is:

A. 12 to18 months
B. 1.5 to 3 months
C. 1 year
D. 6 moths

198. Which of the following options of breastfeeding is beneficial to mothers?

A. Decreased risk for postpartum hemorrhage
B. Delayed onset of menses: decreased incidence of iron deficiency
C. Helps the uterus to return to its previous size
D. All options are true

199. Which of the following factors may cause tachycardia?

A. Atropin
B. Hypothyreosis
C. Chronic pain
D. Increasing intracranial pressure

200. Which characteristic is not true for new patients' bed?

A. Functional beds have two parts
B. Nursing beds' surface can be divided into multiple part
C. Beds with movable foot-piece improve self-sufficient ability
D. Kids' bed have consistent bars

201. Which option is NOT a benefit of Kangaroo mother case?

A. Useful for low baby weight
B. Provide warmth, promote BF
C. Protects from infection
D. Increases IQ

202. Which is the definition of ’febris relapsing’?

A. Febrile and afebrile episodes follow each other with several day difference, causing hypotension
B. Febrile and afebrile periods take turns within a few hours, fluctuation of the body temperature is larger than 1degree
C. The body temperature is increased all day long, there is no afebrile period
D. Febrile and afebrile periods take turns within several days (more than two days) each of which is sustained for longer than 24 hours

203. Which is NOT an essential new born care intervention?

A. Clean childbirth and cord care
B. Initiation of breathing and resuscitation
C. **Bathing the baby**
D. Early and exclusive breastfeeding

204. Specific to acute pain:

A. Activation of parasympatic nervous system
B. Reversible condition
C. Reduced breathing count
D. Sleep disturbances may occur

205. Which of the following sentences is not true about a mother with positive HIV?

A. Baby should have immediate skin-to-skin contact with mother
B. Breastfeeding is one of the most valuable interventions for improving child survival
C. An infected woman can only transmit the virus to the fetus during labor or delivery

206. Specific to Nosocomial Surveillance, EXCEPT:

A. Develops rules of procedure
B. Monitorize the nosocomial infections
C. Nosocomial infections’ symptoms manifest 24 hours after admission
D. Sepsis has to be reported

207. The physician prescribed 25.000 NU of Na-Heparine during morning visit. How many milliliters have to be administered?

A. 1 ml
B. 2 ml
C. 5 ml
D. 10 ml

208. Absence of which reflex can be result of damage to the spinal cord?

A. Planters grasp
B. Palmar grasp
C. Rooting
D. Sucking reflex

209. Priority Decision: While the nurse is obtaining a health history the patient tells the nurse, "I am so tired I can hardly function." What is the nurse's best action at this time?

A. Stop the interview and leave the patient alone to be able to rest
B. Arrange another time with the patient to complete the interview
C. Question the patient further about the characteristics of the symptoms
D. Reassure the patient that the symptoms will improve when treatment has had time to be effective

210. Priority Decision: The nurse prepares to interview a patient for a nursing history but finds the patient in obvious pain. Which action by the nurse is the best at this time?

A. Delay the interview until the patient is free of pain
B. Administer pain medication before initiating the interview
C. Gather as much information as quickly as possible by using closed questions that require brief answers
D. Ask only those questions pertinent to the specific problem and complete the interview when the patient is more comfortable

211. What is an example of a pertinent negative finding during a physical examination?

A. Chest pain that does not radiate to the arm
B. Elevated blood pressure in a patient with hypertension
C. Pupils that are equal and react to light and accommodation
D. Clear and full lung sounds in a patient with chronic bronchitis

212. What is the correct sequence of examination techniques that should be used when assessing the patient's abdomen?

A. Inspection, palpation, auscultation, percussion
B. Auscultation, inspection, percussion, palpation
C. Palpation, percussion, auscultation, inspection
D. Inspection, auscultation, percussion, palpation

213. When performing a physical examination, what approach is most important for the nurse to use?

A. A head-to-toe approach to avoid missing an important area
B. The same systematic, efficient sequence for all examinations
C. A sequence that is least revealing and embarrassing for the patient
D. An approach that allows time to collect the nursing history data while performing the examination

214. In a patient with leukocytosis with a shift to the left, what does the nurse recognize as causing this finding?

A. The complement system has been activated to enhance phagocytosis.
B. Monocytes are released into the blood in larger-than-normal amounts.
C. The response to cellular injury is not adequate to remove damaged tissue and promote healing.
D. The demand for neutrophils causes the release of immature neutrophils from the bone marrow.

215. What effect does the action of the complement system have on inflammation?

A. Modifies the inflammatory response to prevent stimulation of pain
B. Increases body temperature, resulting in destruction of microorganisms
C. Produces prostaglandins and leukotrienes that increase blood flow, edema, and pain
D. Increases inflammatory responses of vascular permeability, chemotaxis, and phagocytosis

216. Priority Decision: Key interventions for treating soft tissue injury and resulting inflammation are remembered using the acronym RICE. What are the most important actions for the emergency department nurse to do for the patient with an ankle injury?

A. Reduce swelling, shine light on wound, control mobility, and elicit the history of the injury
B. Rub the wound clean, immobilize the area, cover the area protectively, and exercise that leg

C. Rest with immobility, apply a cold compress, apply a compress bandage, and elevate the ankle

D. Rinse the wounded ankle, image the ankle, carry the patient, and extend the ankle with imaging

217. Place the following events that occur during healing by primary intention in sequential order from 1 (first) to 10 (last).

_____ a. Blood clots form **1**
_____ b. Avascular, pale, mature scar present **10**
_____ c. Accumulation of inflammatory debris **2**
_____ d. Enzymes from neutrophils digest fibrin **4**
_____ e. Epithelial cells migrate across wound surface **8**
_____ f. Fibroblasts migrate to site and secrete collagen **6**
_____ g. Budding capillaries result in pink, vascular friable wound **7**
_____ h. Contraction of healing area by movement of myofibroblasts **9**
_____ i. Macrophages ingest and digest cellular debris and red blood cells **3**
_____ j. Fibrin clot that serves as meshwork for capillary growth and epithelial cell migration **5**

MULTIPLE CHOICES

FOR THESE QUESTIONS TWO OR MORE ANSWERS ARE POSSIBLE, BASED ON UNIQUE CLUE. PLEASE SELECT AND MARK THE CORRECTS ANSWERS ON THE CUMMULATIVE SHEET!

1. What are characteristics of the literature review required for a quantitative research study? Select all that apply.

   A. The review is exhaustive and must include all studies conducted in the area
   B. Doctoral dissertations and masters' theses are excellent sources of information
   C. Computer-accessed materials are acceptable
   D. Primary sources are not as important as secondary sources

2. Which research process steps may be noted in an article's abstract? Select all that apply.

   A. Identifying the phenomenon
   B. Research question study purpose
   C. Literature review
   D. Design
   E. Sample
   F. Legal-ethical issues
   G. Data-collection procedure

3. Which statement best describes qualitative research? Select all that apply.

   A. Studies are conducted in natural settings.
   B. Data are collected from a large number of subjects.
   C. Data collected tend to be numeric.
   D. The research design is systematic and subjective

4. Which of the following hypotheses are indicative of an experimental research design? Select all that apply.

   A. Frequent irrigation of Foley catheters will be positively related to urinary tract infections.
   B. The incidence of urinary tract infections will be greater in patients whose Foley catheters are irrigated frequently than in those whose Foley catheters are irrigated less frequently.
   C. Frequent irrigation of Foley catheters is associated with urinary tract infections.
   D. The incidence of urinary tract infections will not differ between patients with or without Foley catheters

5. Which of the following could be considered the "context" of a study? Select all that apply.

   A. Cultural understandings and beliefs of study participants
   B. The physical setting of the study
   C. The sample selected for the study
   D. The number of subjects in the study

6. Which beliefs guide the constructivist paradigm? Select all that apply.

   A. There are multiple realities.
   B. The truth is objective.
   C. Context does not matter as much as truth.
   D. The participant (subject) is an active part of the study

7. Which of the following are consistent with the constructivist paradigm? Select all that apply.

   A. Subjectivism is valued.
   B. Natural laws exist.
   C. Time and place are important.
   D. Generalizability is valued.

8. What are the uses of qualitative research methods? Select all that apply.

A. Guiding nursing practice
B. Studying the effects of nursing care on an outcome variable
C. Developing survey instruments
D. Developing nursing theory

9. What are scientific criteria appropriate for qualitative research? Select all that apply.

A. Auditability
B. Credibility
C. Fittingness
D. Reliability

10. What are ethical concerns for qualitative researchers? Select all that apply.

A. Because the study emerges over time, the researcher may not anticipate and inform the participants of a potential threat.
B. To maintain a naturalistic environment for interviews, formal documents such as consent forms are not used.
C. Because there are so few participants in a qualitative study, no participant can opt out of the study.
D. Because the researcher and participant interact over a period of time, relationships developed between them may change the focus of the interaction

11. How can qualitative outcome analysis be used? Select all that apply.

A. To determine the reliability of intervention outcomes in a study
B. To confirm the applicability of clinical strategies
C. To develop interventions and then test those selected
D. To build theory

12. When critiquing a qualitative study, which of the following questions are helpful in determining the study's auditability? Select all that apply.

A. Has adequate time been allowed to understand the phenomenon fully?
B. Can the reader follow the researcher's thinking?
C. Are the results meaningful to individuals not involved in the research?
D. Does the researcher document the research process?

MULTIPLE CHOICES BASED ON PERMANENT CLUE

BY THIS TYPE OF QUESTIONS YOU CAN FIND ONE, TWO, THREE OR FOUR CORRECT ANSWERS. BASED ON THE GIVEN CLUE, MARK THE CORRECT ANSWER ON THE CUMMULATIVE SHEET!

A. if answer 1, 2 and 3 is correct
B. if answer 1 and 3 is correct
C. if answer 2 and 4 is correct
D. if only answer 4 is correct
E. if all the answers are correct

1. What formula smooths the roughness of the articular surfaces in the knee joint? D

   1) Patella
   2) Anterior and posterior cruciate ligament
   3) Collateral ligaments
   4) Medial and lateral menisci

2. Skeletal muscles characteristic: C

   1) Passive organ of the motor system
   2) Consist of more than 600 striated muscles
   3) Functions involuntarily
   4) Innervated by motory and sensory neurons

3. Supported area of the superior mesenteric artery: A

   1) Small intestines
   2) Coecum
   3) Ascending colon
   4) Pancreas

4. The pleura's characteristic: B

1) Visceral layer follows lung lobes'sulci
2) Bordering towards the diaphragm
3) Serous membrane
4) Two layers stick together tightly

5. Tunica muscularis (muscular layer) of the wall of the alimentary canal is like: C

1) Single layer of smooth muscle
2) Able to perform peristalsis
3) Innermost layer covering the organs
4) Plexus of nerves situated between the two muscular layer

6. Kidney medullar substance characteristic: C

1) 3-5 mm in width
2) Pyramid like parts build up
3) Urothelium lining
4) Urine collecting canals show a striated structure

7. Feature of the scala anterior (frontal cranial fossa): D

1) Large wing of the ethmoid bone forms the base
2) Foramen opticum opens here
3) Foramen magnum opens here
4) Contains the frontal lobes of the brain

8. Structure made of abdominal muscles: B

1) Rectus sheath
2) Diaphragm
3) Inguinal canal
4) Thoracic cave

9. Trachea's characteristic: B

1) Starting from the height of the 7th cervical vertebra
2) Tubular organ opening in the pharynx
3) Truss formed by C-shaped cartilages
4) The epiglottis is an important part of it

10. Oral cavity's characteristic: E

1) Covered by startified squamous epithelium
2) Lower wall mainly formed of the mylohyoid muscle
3) Salivary glands get their secrets here
4) Situated from the oral aperture to the pharynx

11. Part of the renal capsule around kidneys: B

1) Tunica fibrosa
2) Cortex
3) Renal fascia
4) Medulla

12. Nucleotides can be… B

1) Important components of coenzymes, ex. FAD, NAD^+
2) Degraded to lipids
3) Energy storing molecules, like ATP
4) The building block of proteins

13. True for proteins: A

1) Its building blocks are amino acids
2) They can be heat denaturated
3) They can have quaternary structure
4) They can be found only in animals

14. True stereoisomers… D

1) Stereoisomers are same molecules
2) can't be distinguished ex. smell and taste in humans
3) Stereoisomers are same molecules with different covalent bonds
4) **Enzymes have the ability to distinguish between stereoisomers**

15. True for water… E

1) **Dipole molecule**
2) **Can form hydrogen bonds**
3) **Good polar solvent**
4) **Created during cellular respiration**

16. True for enzymes…. E

1) **They have complex 3D structure**
2) **Enzymes are protein catalysts for biochemical reactions in living cells**
3) **They can contain a cofactor**
4) **They are classified according to the type of reaction they catalyze**

17. True for glycolysis… C

1) This process is about the production of glucose
2) **This process doesn't need O_2**
3) This metabolic process has a net production of 36 ATP
4) **This pathway converts glucose to pyruvate**

18. Mitochondria's feature: E

1) **Its inner membrane contains ATP synthase**
2) **Disruption of the outer membrane leads to cell death**
3) **Powerhouse of the cell**
4) **Has its own DNA**

19. The Na/K pump: A

1) **On each cycle, the pump exchanges three Na^+ ions from the intracellular space for two K^+ ions from the extracellular space**
2) It makes the sodium concentration low in the extracellular space and high in the intracellular space
3) **Needs of ATP to work**
4) It gives the intracellular space a positive voltage with respect to the extracellular space

20. True for lysosomes: C

1) Common in plant cells
2) **Have low internal pH**
3) Containing protein synthesis enzymes
4) **Its enzymes produced in the endoplasmic reticulum**

21. Passive transport's feature(s): A

1) **No need of ATP**
2) **One type of it is the facilitated diffusion**
3) **Transport of molecules through the cell membrane bilayer**
4) Molecules are transported from the low concentration to the high concentration

22. True for interphase: B

1) **It is also called preparatory phase**
2) Proceeds in three stages: G_1, G_2, M
3) **Cell's nuclear chromosomes are duplicated during this phase**
4) The first phase within interphase is mitosis

23. True for the genetic code: D

1) After reading one triplet, the “reading frame” shifts over the next letter
2) Codons determine the nucleic acids sequence in the DNA synthesis
3) The code is non-degenerate
4) 64 codons exist

24. Notifiable diseases in Hungary: E

1) Scarlat fever
2) Meningitis purulenta
3) Meningococcus meningitis
4) Snail fever

25. True for Scarlat fever: C

1) Caused by Streptococcus pneumoniae
2) Notifiable disease in Hungary
3) The B-type can be reduced by vaccine
4) Caused by Streptococcus pyogenes

26. Staphylococcus aureus strains produce: E

1) Coagulase
2) Hyaluronidase
3) Beta-lactamase
4) Hemolysin

27. HBV is transmitted by: B

1) Contact with blood
2) Food
3) Contact with body fluids
4) Water

28. Which of the following STDs is caused by bacterium? A

1) Syphilis
2) Chlamydia
3) Gonorrhea
4) Trichomonas

29. Charactristics of STDs: C

1) Short incubation time
2) Pathogens are susceptible to dehydration
3) All of them are with viral origin
4) Primary immunity can usually be avoided

30. How can STDs be transmitted? E

1) With sperm
2) With vaginal fluid
3) With blood
4) With saliva

31. Booster vaccination: D

1) Polio
2) BCG
3) Yellow fever
4) MMR

32. Reasons for re-eruption of some infectious diseases can be: E

1) Genetic changes of pathogens
2) Human migration
3) Climate change
4) Neglect of vaccines

33. Action of antibiotics can be: B

1) Inhibition of cell wall
2) Inhibition the RER
3) Inhibition of protein synthesis
4) Inhibition of function of mitochondria

34. Characteristics of the ideal antimicrobial therapy: E

1) Selectively toxic to the microbe
2) Nontoxic to host cell
3) Remains active in tissues and body fluids
4) Does not disrupt the host´s health

35. The HPV viruses are transmitted: B

1) With skin contact
2) With deoplets
3) Sexually
4) With feces

36. Oncoviruse: A

1) Human Papilloma Virus
2) Epstein Barr Virus
3) Kaposi Sarcoma Herpes Virus
4) Calici virus

37. The shape of viral capsid can be: A

1) Helical
2) Complex
3) Cubical
4) Spherical

38. True for viruses: E

1) They consist of a single or double strand of RNA or DNA
2) The genetic material is surrounded by protein coat
3) They can infect all of living organs
4) They are unable to replicate without a host cell

39. True for bacterial endospores: B

1) They are dehydrated and metabolically inactive
2) Reproductive parts of bacteria
3) Endospores have thick coat layer
4) Sensitive to ordinary cleaning methods and boiling

40. Which statement(s) is/are true for antiseptic method? A

1) Provides bactericid effect
2) Antibiotics are antiseptic materials
3) Physical method may be radiation
4) Antisepsis is more effective than asepsis

41. Specific to blood pressure measurement: C

1) Cuff is inflated up to 200 mmHg
2) Connector wire of the cuff has to be over the brachial artery
3) During auscultation the membrane of the stethoscope is over the vena mediana cubiti
4) In sitting position the back of the patient has to be supported

42. Characteristics of nosocomial infections: C

1) Sepsis is the most frequent nosocomial infection
2) Pneumonia is the most frequent infection in ICU
3) Symptoms manifest 24 hours after admission
4) Affect the health care providers as well

43. Reverse –Trendelenburg position is used in: B

1) To increase lung capacity
2) In hypovolemic condition
3) In brain injury
4) In meningitis

44. Specific to pain assessment: E

1) PAINAD is a one-dimensional score
2) Pain affects the heart frequency rate
3) NAS gives the values between 0-10
4) Pain has qualitative factors as well

45. Specific to heart frequency: E

1) May be measured for 30 second
2) Carotid massage may reduce tachycardia
3) Extrasystole is a pathological, rhythmic feature
4) Pulse deficit is physiological if the difference is 5/min

46. Fowler position is used: B

1) To increase lung capacity
2) To feed patient
3) To decrease breathlessness
4) To reduce abdominal pain

47. Specific to waste management: B

1) Package contaminated with iodine is hazardous waste
2) Maximum weight is 12 kg
3) Cut-resistant, reusable container is for sharp waste
4) Communal wastes are collected in black bags

48. Specific to the types of medication orders: E

1) PRN is used for the request of the patient
2) STAT order is used in emergency cases
3) Now order is given in 90 minutes
4) One-time order is given examinations

TRUE-FALSE

DECIDE ON THE NEXT QUESTIONS IF THEY ARE TRUE OR FALSE AND MARK TRUE WITH *T* AND FALSE WITH *F* ON THE CUMMULATIVE SHEET!

1. Hyaline cartilage cells nourished by diffusion. **T**
2. Mastoid process belongs to the parietal bone. **F**
3. Central tendon is part of the Diaphragm. **T**
4. The innermost layer of the blood vessels wall is the tunica intima which consist of circular smooth muscle fibres and thicker in arteries. **F**
5. Ventillation surface in the lungs is 20-40 square meters. **F**
6. While inhalation, the diaphragm moves down making the thorax vertically expand. **T**
7. The liver is a retroperitoneal organ. **F**
8. There are 2 canine teeth in a quadrant. **F**
9. Intestinal villi are the surface-expanding structures of the large intestines. **F**
10. The epithelium consist of cells, fibres they produce and base substance. **F**
11. The ellypsoid joint is a biaxial joint type. **T**
12. Muscle tissue contains myofibrils. **T**
13. The Sinus-node is the primary impulse-generating tissue of the heart. **T**
14. Starting point for the Pulmonary Circuit is the right atrium. **F**
15. Ventillation surface in the lungs is 20-40 square meters. **F**
16. Fit between the substrate and the active site of the enzyme is not exact. **F**
17. Oligosaccharides contain 3 to 10 sugar units. **T**
18. Glycogen is a very large, branched polymer of glucose. **T**

19. Purine degradation takes place mainly in the kidney of humans and requires an assortment of enzymes to degrade purines to urea. **F**

20. The energy yield from a gram of fatty acids is more than the energy yield from a gram of carbohydrates. **T**

21. Photosynthesis needs light energy, CO_2 and water and produces carbohydrate and oxygen. **T**

22. The right order of mitosis phases steps: anaphase-prophase-metaphase-telophase. **F**

23. rRNS are produced in the nucleolus. **T**

24. The ribosomes that become attached to the endoplasmic reticulum synthesize all transmembrane proteins. **T**

25. Prokaryotic cells consist of single closed compartment that is surrounded by the plasma membrane and have a defined nucleus. **F**

26. Glycolipid bilayer is the basic structure of membranes. **F**

27. Gap junctions are small channels between cells that allow for intercellular communication.**T**

28. During DNA replication the DNA is replicated to mRNA. **F**

29. Methionine is known as the stop codon. **F**

30. All of Human Papilloma Viruses are with high risk. **F**

31. The common name of Mycobacterium tuberculosis is Koch bacillus. **F**

ASSOCIATION

IN THS TYPE OF QUESTIONS YOU CAN FOUND NOTIONS (A,B,C,D) AND JUDGEMENTS/STATEMENTS (1,2,3,4). FIND THE LOGICAL BIND BETWEEN THEM AND PAIR NOTIONS WITH STATEMENTS. STATEMENTS CAN REFER TO EITHER ONE, MORE OR NONE OF THE NOTIONS. WRITE THE RIGHT LETTER OF EACG STATEMENT ON THE CUMMULATIVE SHEET!

1.

A. Inferior vena cava
B. Superior vena cava
C. Both
D. None of them

1. Collects venous blood from the upper limb, neck, head. **B**
2. Transfers venous blood from the odd organs of the abdominal cavity **D**
3. Spawn from the junction of the left and right common iliac artery **A**
4. Intakes the veins of the liver **A**

2.

A. Liver
B. Pancreas
C. Both
D. None of them

1. hexagonal lobules are anatomical units **A**
2. retroperitoneal organ **B**
3. arterial and venous blood mixing in the functional units **A**
4. Langerhans-islands produce insulin **D**

3.

A. Urinary bladder
B. Urethra
C. Both
D. None of them

1. Inner surface completely lined by urothelium **A**
2. Located in the smaller pelvis **A**
3. Voluntary sphinchter is at the height of the bottom of the pelvis **B**
4. Glandular ducts can be found in the mucous membrane wall **B**

4.

A. Internal carotid artery
B. External carotid artery
C. Both
D. None of them

1. Spawn from common carotid artery **C**
2. Task is to supply the brain **A**
3. Supplies thyreoid gland, tongue, face **B**
4. Supplies the cerebellum **D**

5.

A. Stomach
B. Pancreas
C. Both
D. None of them

1. Dual glandular organ **B**
2. Intraperitoneal **A**
3. Its head is in the curve of the duodenum **B**

4. Situated between the 11th thoracal and 1st lumbar vertebra **A**

6.

A. Malpighi-corpuscle
B. Henle-loop
C. Both
D. None of them

1. Can be found in the cortex of the kidneys **A**
2. Can be found in the medulla of the kidneys **B**
3. Its continuation is the proximal convoluted tubule **A**
4. Most of the reabsorption of the ultrafiltratum is made here **D**

7.

A. Citric acid cycle
B. Oxidative phosphorylation
C. Both
D. None of them

1. Takes place in the mitochondria **C**
2. Also known as Krebs cycle **A**
3. NADH generated by this process **A**
4. The process redox reactions release energy, which is used to form ATP **B**

8.

A. DNA
B. RNA
C. Both
D. None of them

1. It is a polynucleotide molecule **C**
2. It contains uracil **B**
3. It has double strand structure **A**
4. It can contain amino acids **D**

9.

A. Lipids
B. Polysaccharides
C. Both
D. None of them

1. Its catabolism occurs via β-oxidation **A**
2. Starch belongs to this group **B**
3. It can be energy storage molecules in the body **C**
4. Glycogen belongs to this group **B**

10.

A. DNA synthesis on the lagging strand
B. DNA synthesis on the leading strand
C. Both
D. None of them

1. Replication direction is 3'→ 5' **D**
2. Replication direction is 5'→ 3' **C**
3. Okazaki fragments are created **A**
4. Replication starts with a primer **C**

11.

A. tRNS
B. mRNS
C. Both
D. None of them

1. Contains the amino acid sequence information for the protein synthesis **B**
2. Transporting the nucleic acids to the place of translation **D**
3. Carries amino acids to the ribosome **A**
4. It undergoes splicing **B**

12.

A. Mitosis
B. Meiosis
C. Both
D. None of them

1. Daughter cells are genetically identical to the parental cells **A**
2. Number of divisions are 2 **B**
3. Number of daughter cells are 2 **A**
4. Last step of the division is cytokinesis **C**

13.

A. Cheyne-Stokes breathing
B. Kussmaul breathing
C. Both
D. None of them

1. Pathological pattern **C**
2. Caused by CNS injury **A**
3. Hyperventillation **B**
4. Breathing is paused by apnotic periods **A**

14.

A. Otological treatment
B. Ophtalmological treatment
C. Both
D. None of them

1. Sterile medication has to be used **B**
2. Body temperature products have to be used **A**
3. May be given in side-laying position **A**
4. Bypass first pass effect **C**