Research proposal are usually written in style:

a. DPA Style
b. WPA Style
c. APA Style
d. ZPA Style
e. SPA style

107. Which of the following is correct for word `SMARTO`:

a. Specific, Measurable, Active, Reliable, Time Bound and Observable
b. Specific, Measurable, Achievable, Reliable, Transfer and Observable
c. Specific, Measurable, Achievable, Restable, Time bound and Observable
d. Specific, Measurable, Achievable, Reliable, Time bound, Observable
e. Specific, Alert, Opportunity, Time bound, Remarkable, Memorable

108. The objective of citation style manuals is:

a. Attribution of other's intellectual work
b. Attribution of own intellectual work
c. Attribution of supervisor facilitation
d. Attribution of volunteers work
e. Attribution to institution

109. APA style means:

a. All publishers annual work style
b. American psychological association
c. Australian psychological association
d. All Pakistan publication association
e. Affiliated publisher association

110. 50yr old female presented with arthritis of 3months duration. According to her she is stiff in morning which stays for upto 2hrs. Her small joints of hands esp metacarpophalangeal joints of both hands are badly involved. During day joint pains improves and she can perform her daily activities. She doesnt have skin rashes , low back pain and photophobia. What is the diagnosis?

a. psoriatic arthritis
b. ankylosing spondylitis
c. rheumatoid arthritis
d. SLE
e. reactive arthritis

111. 25yr old female presented with difficulty walking for many years, especially going upstairs. She felt paresthesia in hands and feet and occasional spasm.
O/E waddling gait.
Investigations
Calcium :1.8mmol/l (2.1- 2.6)
Phosphate: 0.54mmol/l (0.7-1.4)
Alkaline phosphatase is high
What is the diagnosis?

a. osteopenia
b. osteoporosis
c. osteomalacia
d. pagets disease
e. osteitis fibrosa cystic

112. 35 yr old frmale presented with petechies and bruises of sudden onset in her arms and legs and also heavy menstrual bleed unexpectedly early this time
Investigations shows
Hb 8gm/dl
TLC. 7000/cmm
Platelets = 8000/cmm
Peripheral smear shows normal shape WBC and RBC
What is the diagnosis?

a. ITP
b. CML
c. acute leukemia
d. aplastic anemia
e. henoch schonlein purpra

113. A 50 yr old male presented with extreme fatigue , wt loss, excessive sweating and abdominal fullness
O/E he has massive splenomegally.
Investigations shows:
Hb 12gm/dl
TLC 150,000/cmm (4000 to 11000)
Platelets 600,000 (150,000 to 450,000)
DLC shows 90% neutrophils and 10% lymphos
What is the diagnosis/

a. CLL
b. CML
c. ALL
d. Essential thrombocytosis
e. AML

95. PASSIVE SMOKING MEANS:

a. Chewing tobacco
b. Inhaling other used some
c. No smoking
d. Sniffing tobacco
e. Shisha tobacco

96. If you are exposed to potentially infectious materials (PIM) while working, you may request a vaccine for which blood -borne disease?

a. syphillis
b. HIV
c. HBV
d. Influenza
e. Malaria

97. The exposure incident most likely to result in the transmission of a bloodborne pathogen is:

a. Being in a room with an HIV-infected patient without wearing a face maskIncorrect response.
b. Blood or other bodily fluids coming in contact with intact skin
c. A needle-stick injury
d. Splashing of blood or other bodily fluids into the eyes or other mucous membranes
e. Shaking hands with the infected person

98. In prevention of traffic accidents the most effective measure is:

a. Licensing of drivers
b. Provision of seat belts
c. Enforcement of traffic laws
d. Inspection of vehicles periodically
e. Medical inspection of drivers every six months

99. A mother brought her four year old child to the doctor. She gave the history that her child was in close contact with a case of diphtheria in school. She was very anxious about her child and gave history of booster dose of DT 2 years ago. What would be line of management for such a child?

a. Booster dose of DT with penicillin
b. Active and passive immunization
c. Active and passive immunization with chemoprophylaxis
d. Only keep under surveillance for 1 week
e. Nothing more required

100. A 1 year old child is being treated at Shaukat Khanam Hospital Lahore and getting radiotherapy for carcinoma. A polio case has been detected in his residential locality. Pediatrician decides to protect him against poliomyelitis by giving:

a. Human normal immunoglobulin
b. Human specific immunoglobulin
c. Oral polio vaccine
d. Inactivated polio vaccine
e. Chemoprophylaxis with antiviral drugs

101. Maintaining the cold chain ensures that vaccines are stored according to the manufacturer's instructions at:

a. 0- +4oC
b. -1-+5oC
c. +2-+10oC
d. +4-+8oC
e. +2-+8oC

102. Facial nerve can be paralysed in all of the following except:

a. Middle ear surgery
b. Parotid gland surgery
c. Herper zoster infection
d. Inner ear surgery
e. Temporal bone fracture

103. The structure NOT involved in the Accomodation reflex is:

a. Ciliary body
b. Sphincter pupillae
c. Zonularfibres
d. Medial Rectus
e. Lens capsule

104. Jason's friend Mike is going through a very difficult time. Jason focuses on really trying to understand what his friend is going through and put himself in Mike's shoes. Jason is expressing:

a. Sympathy
b. Understanding
c. Empathy
d. Kindness
e. Compassion

105. In research proposal format, the first component is:

a. Introduction
b. Title page
c. Research Methodology
d. Ethical Consideration
e. Literature Review

Iodine Benzidine test is employed to detect:

a. Blood stain
b. Seminal stain
c. Tobacco stain
d. Vaginal secretion
e. Swab of saliva

83. Tailing is seen in:

a. Contusion
b. Stab injury
c. Incised wound
d. Laceration
e. Fire arm entry

84. The most delicate and sure test for blood whether in fresh or old condition is:

a. Spectroscopic
b. Microscopic
c. Biological
d. Chemical
e. Physical

85. Concussion of the spine is also known as:

a. Railway spine
b. Jack knife injury
c. Whiplash injury
d. Lower back bruise
e. Abdominal punch

86. Contusion is another name of:

a. Bruise
b. Abrasion
c. Incision
d. Stab
e. Congestion

87. Shot gun injuries are characterized by:

a. Multiple projectiles with shots and wad
b. Shots not dispersed
c. Exit wound is usually not there
d. Burning effect
e. Fracture of bones

88. A lacerated wound is caused by:

a. Sharp edged weapon
b. Flame
c. Corrosive
d. Blunt impact
e. Stab wound

89. In abdominal stab resulting in perforation of small intestine, the nature of hurt will be:

a. Shajjah khafifa 337
b. Jurh-ghair –jaifa-damiah 337E
c. Jurh Jaifa 337-B
d. Itlaf-i-udw
e. Itlaf-i-salahyiat-i-udw

90. Heat cramps result from exposure to:

a. Hot climate
b. Hot and humid climate
c. Electricity
d. High altitude air
e. Low altitude air

91. Every contact leaves its trace is called:

a. Icard's exchange principle
b. Ticard's exchange principle
c. Hicard's exchange principle
d. Locard's exchange principle
e. Bertillion principal

92. Which of the following vaccine does not come under the list of mandatory or recommended vaccines administered during childhood?

a. DtaP (diphtheria, tetanus, and pertussis)
b. Polio
c. MMR
d. Hepatitis A and B
e. Rabies

93. The BCG vaccine used for the prevention of tuberculosis is derived from which of the following microorganism?

a. Bordetella pertussis
b. b) Bacillus subtilis
c. Mycobacterium bovis
d. Saccharomyces cerevisiae
e. diphtheria

94. Which of the following is Not the example of a live attenuated vaccine?

a. Tetanus vaccine
b. MMR vaccine
c. Varicella (chickenpox) vaccine
d. Influenza vaccine
e. rubella vaccine

71. A 25-year-old man is diagnosed to have of erythema multiforme. Which of the following is the probable etiology of this condition?

a. Physical scratching of the skin
b. IgG autoantibodies directed against the epidermal intercellular cement substance
c. IgA antibody deposits localized to the tips of dermal papillae
d. Hypersensitivity to multiple concomitant infectious agents or drugs
e. Chemical exposure

72. The most important proof of poisoning in a living is:

a. Presence of poison in excreta
b. Poison in food
c. Poison in drinks
d. Presence of poison in blood and urine
e. Poison in hair

73. Substances which counteract the poisons by forming harmless insoluble compounds are:

a. Mechanical antidotes
b. Physiological antidotes
c. Chemical antidotes
d. Biological antidote
e. E.D.T.A antidote

74. Stomach is removed from the dead body by:

a. Ligating at esophageal and pyloric end
b. Double ligature at both ends
c. Not necessary to ligate at the ends
d. Removal with esophagus upper end
e. Removal with intestines (small)

75. In case, the cause of death could not be determined even after a thorough P.M.examination, toxicological analysis and histopathological examination it is called as:

a. Failure in autopsy
b. Negative autopsy
c. Unusual autopsy
d. Incorrect autopsy
e. In determined

76. Double thick rubber gloves must be used while performing autopsy on the body of a victim of:

a. AIDS
b. Tuberculosis
c. Infective hepatitis
d. German measles
e. Cholera

77. Determination of cellular death of an organ is important for:

a. Transplantation
b. Time of death
c. Time of injury
d. For burial
e. For cremation

78. Which one is not immediate signs of death:

a. Pallor and loss of elasticity of skin
b. Stoppage of respiration and circulation
c. Loss of voluntary power and insensibility.
d. Retinal arterial changes
e. Rigor mortis

79. Postmortem caloricity is seen in deaths due to:

a. Natural calamities
b. Electric shock
c. Infections
d. Burns
e. Chest injuries

80. Fixation of postmortem staining would take place in:

a. 3 to 4 hrs
b. 4 to 6 hrs
c. 6 to 8 hrs
d. 10 to 12 hrs
e. 12 to 16 hrs

81. Choking is:

a. Constriction of muzzle end
b. Constriction of breech end
c. Constriction of centre of barrel
d. Constriction near the centre of barrel
e. A tapering contiction from breech to muzzle

A 12-year-old Caucasian male presents with his mother to the pediatrician's office complaining of right thigh pain. He reports that he has noticed slowly progressive pain and swelling over the distal aspect of his right thigh over the past two months. A radiograph of the patient's right leg shows distal femoral diaphysis with periosteal reaction leading to the classic "onion skinning" appearance. Biopsy of the lesion demonstrates sheets of monotonous small round blue cells with minimal cytoplasm. Which of the following genetic mutations is most likely associated with this patient's condition?

a. t(8;14)
b. t(11;22)
c. APC inactivation
d. TP53 inactivation
e. RB1 inactivation

65. A 25-year-old woman complains of weakness and easy fatigability, which is most pronounced in the late afternoon. She describes difficulty reading and tiredness while watching television. She has problems chewing and swallowing and loses her voice while talking. Physical examination reveals ptosis and diplopia. Laboratory studies would most likely demonstrate serum autoantibodies directed against which of the following proteins?

a. Acetylcholine receptor
b. Phosphodiesterase
c. Desmin
d. Dystrophin
e. Troponin

66. A 4 year-old boy is brought to the physician by his parents because he falls a lot, cannot jump and tires easily. Physical examination reveals weakness in the pelvic and shoulder girdles and enlargement of the child's calf muscles. The serum level of creatine kinase is elevated. A biopsy of calf muscle reveals marked variation in size and shape of muscle fibers. There are foci of muscle fiber necrosis, myophagocytosis, regenerating fibers, and fibrosis. Which of the following is the most likely diagnosis?

a. Limb–girdle muscular dystrophy
b. Becker muscular dystrophy
c. Congenital muscular dystrophy
d. Duchenne muscular dystrophy
e. Spinal muscular atrophy

67. The test likely to help in diagnosis of a patient who presents with an itchy annular plaqueassociated with a scaly, palpable edge, on the face is:

a. Gram's stain
b. Wood's lamp examination
c. Potassium hydroxide mount
d. Tissue smear
e. Patch test

68. A 37-year-old man presented to his primary care physician with a 2-week history of painful lesions on his soft palate that prevent him from eating normally. Three weeks later, additional lesions appeared on the patient's face, chest, and extremities. On examination there are multiple erythematous ulcers of the oral mucosa and round to oval vesicles and flaccid bullae seen on the patient's arm. Microscopy reveals a suprabasal blister due to acantholysis. The diagnosis is:

a. Pemphigus foilaceous
b. Bullous pemphigoid
c. Pemphigus vulgaris
d. Dermatitis herpetiformis
e. Aphthous ulcer

69. In a skin lesion removal of scales reveals a glistening red membrane. Small bleeding points are observed after breaking through the membrane (Auspitz sign). The diagnosis is:

a. Staph scalded skin syndrome
b. Tinea
c. Pityriasis
d. Psoriasis
e. Pemphigus

70. A 50-year-old driver presents to the clinic for evaluation of a pigmented lesion on his arm. He states that he first noticed the lesion last year, but he believes that it has been slowly growing in size. He is concerned with risk of melanoma. Which of the following findings on physical exam would suggest a malignant diagnosis?

a. Flat lesion with symmetric hyperpigmentation
b. Hyperpigmented lesion with smooth borders
c. Symmetrical ovoid lesion
d. Different pigmentation throughout the lesion
e. Tenderness to palpation

57. A 30 year old man presents with fever and pain in his right big toe that woke him up at night. He has been taking aspirin to relieve the pain without relief. His mother has severe Osteoarthritis. The right toe is swollen, hot and exquisitely sensitive to touch. Laboratory studies reveal a neutrophilic leukocytosis and left shift. A synovial tap was performed. Based on the above history, his problem is most likely related to which of the following?

a. A joint inflammation secondary to a positively birefringent crystal with septic arthritis
b. Disseminated gonococcemia
c. Underexcretion of uric acid in the urine
d. Osteomyelitis secondary to hematogenous spread of Staphylococcus aureus
e. An HLA B27 positive spondyloarthropathy

58. A 65 years old male is surprised to find that his hat size has increased. In routine check up, serum alkaline phosphatase is markedly elevated. Serum calcium and phosphorus are normal. Examination reveals enlargement of skull with frontal bossing, enlarged maxilla and progressive hearing loss. Which of the following is associated with bone disorder suggested by these findings?

a. Brown tumor
b. Polystotic fibrous dyplasia with severe deformities
c. Subperiosteal hemorrhage and osteoporosis
d. Defective calcification of osteoid matrix
e. Pagets disease of bone

59. A 36 year old man, who has had problems with his lower back since his early twenties, presents with blurry vision in his right eye. Physical exam reveals a ciliary flush and a poor pupillary response to light in the right eye. The intraocular pressure is normal. He also has reduced anterior flexion and dryinspiratory crackles at both lung bases. The patient is presently taking indomethacinfor back pain. You would expect an x-ray of the patient's back to reveal...

a. Radiodense lesions in the vertebra
b. Osteophytes at the joint margins
c. Lytic lesions in the vertebra
d. Fusion of the vertebra
e. Vertebral compression fractures

60. Which of the following characterizes joint disease associated with rheumatoid arthritis rather than osteoarthritis?

a. Cartilage fibrillation
b. Subchondral bone cysts
c. Osteophytes
d. Ankylosis of the joint
e. Bouchard's nodes

61. Disabling joint disease, nodular lesions in the lung associated with dust borne diseases, xerostomia, and splenomegaly characterize a rheumatologic disease with which one of the following laboratory abnormalities?

a. Positive serum antinuclear antibody with a rim pattern
b. Anti-centromere antibodies
c. IgM antibodies against IgG
d. Positive band test on a skin biopsy
e. Anti-ribonucleoprotein antibodies

62. A 24 year old woman with a previous history of morning stiffness of both hands presents with dyspnea, neck vein distention with inspiration, and muffled heart sounds. Urinalysis reveals RBC casts, hematuria, and mild to moderate proteinuria. A serum antinuclear antibody test is positive and has a titer of 1:1280. Based on these findings, the most likely diagnosis is:

a. mixed connective tissue disorder
b. progressive systemic sclerosis
c. systemic lupus erythematosus
d. juvenile rheumatoid arthritis
e. adult rheumatoid arthritis

63. A 17 years boy presented with pain and swelling about left knee for the past 1 month and was severe enough to cause him to limp. Radiographs of the knee demonstrated a lifting of the periosteum and a speculated sunburst pattern in distal femur. Which of the following is most likely diagnosis?

a. Giant cell tumor
b. Chondrosarcoma
c. Ewing sarcoma
d. Knee sprain
e. Osteosarcoma

49. A 9 year old girl presents with colicky pain secondary to entrapment of small bowel by enlarged para-aortic lymph nodes. A section of lymph node removed at laparotomy reveals a diffuse neoplastic infiltrate of small, round lymphocytes with a "starry sky" appearance. The probable diagnosis is:

a. Sezary syndrome
b. Hodgkin's disease
c. Burkitt's lymphoma
d. Immunoblastic lymphoma
e. Waldenstrom's macroglobulinemia

50. A 28 yr old woman has an anterior mediastinal mass and non-tender lymphadenopathy in the right supraclavicular node is most likely diagnosed with which of the following?

a. Histocytosis X
b. Sezary syndrome
c. Hodgkin's disease
d. Burkitt's lymphoma
e. Immunoblastic lymphoma

51. A 36 year old woman presented with weakness, lassitude and feeling easily tired. Her bone marrow aspirate showed 15% myeloblasts and reduced erythropoiesis. The most likely cause is:

a. Acute myeloid leukaemia
b. Acute lymphoid leukaemia.
c. Myelofibrosis
d. Myelodysplastic syndrome
e. Chronic myeloid leukaemia

52. A peripheral blood smear showing increase in numbers of neutrophils, band cells, metamyelocytes, myelocytes, basophils, eosinophils and platelets is most suggestive of which of the following diagnosis?

a. Acute myeloid leukaemia
b. Acute lymphoid leukaemia.
c. Chronic myelocytic leukaemia
d. Chronic lymphocytic leukaemia
e. Hairy cell leukaemia

53. A 3-year-old boy who exhibits prolonged bleeding after minor trauma and a prolonged aPTT but a normal platelet count, is likely to be diagnosed with:

a. Liver dysfunction.
b. Disseminated intravascular coagulation.
c. Hemophilia
d. Thrombocytopenia
e. Thromboasthenia

54. A 15 years old boy presented with pallor and jaundice for last three years. His mother had cholecystectomy for gall stones. His spleen was palpable 5 cm below costal margin. His complete blood counts revealed Haemoglobin 9.1 g/dL, MCV 91fL, MCH 31pg, serum bilirubin 3.1 mg/dL with unconjugated serum bilirubin 2.7 mg/dL, reticulocyte count 8.7 % (high) and serum lactate dehydrogenase (LDH) 800 U/L (high). Peripheral film shows small monomorphic RBCs with no normal central pallor. Ultrasound shows multiple gallstones in the gall bladder along with splenomegaly. What is the most likely diagnosis in this patient?

a. Chronic malaria.
b. Glucose 6 phosphate dehydrogenase deficiency.
c. Hereditary spherocytosis.
d. Acute viral hepatitis.
e. Microangiopathic haemolytic anaemia.

55. Which of the following laboratory findings characterize a patient with DIC?

a. Elevated plasminogen
b. Elevated protein S and C
c. Decreased fibrinogen
d. Normal clotting times (PT, APTT and TT)
e. Thrombocytosis

56. A 23-year-old man requires a root canal for an abscessed tooth for which he has been taking pain medication. On the day prior to the procedure, he develops a severe nosebleed, which prompts his dentist to order a few laboratory studies. He has normal PT and PTT. Bleeding time is 16 min (2-7 min), platelet count 200,000 mm^2 (150,000-400,000 mm), Hgb 15.5 g/dL (13.5-17.5 g/dL). Which of the following hemostasis abnormalities is most likelypresent in this patient?

a. Von Willebrand's disease
b. Hemophilia A
c. Factor IX deficiency
d. Acquired platelet defect
e. Acquired vascular defect

41. A 68 year old woman with long standing rheumatoid arthritis presents for evaluation of anemia. Laboratory studies show a hemoglobin of 8, MCV 78, ferritin 350, transferrin saturation 15%, TIBC 220, reticuloyte count 1.5%, white blood cell count 7600/mm', platelet count 340,000/mm³. The likely cause is:

a. Iron Deficiency Anemia
b. Anemia of Chronic Disease
c. Sickle Cell Anemia
d. Aplastic Anemia
e. Sideroblastic anemia

42. A febrile 23 year old college student presents with fatigue and difficulty with swallowing. Physical exam reveals exudative tonsillitis, palatal petechia, cervical lymphadenopathy and tender hepatosplenomegaly. A CBC reveals a mild microcytic anemia, lymphocytic leukocytosis with 20% of the atypical lymphocytes, and a mild thrombocytopenia. You would expect this patient to have?

a. A low TIBC
b. A normal serum ferritin
c. An elevated total bilirubin
d. Heterophile antibodies
e. Normal serum AST and ALT titers

43. A 19 year old woman presents with fatigue and exercise intolerance. She has a history of menorrhagia. A CBC reveals a microcytic hypochromic anemia, a low normal WBC count, a normal platelet count. A corrected reticulocyte count is <2%. The next most important step is to order which of the following investigations?

a. serum ferritin
b. Coombs' test
c. Serum folate/Biz
d. Hgb electrophoresis
e. Sickle cell preparation

44. A 55 yr old man has a microcytic anemia. Which of the following is the first step in the work-up of the patient?

a. Serum ferritin
b. Stool guaiac
c. Bone marrow
d. Direct Coombs test
e. Hgb electrophoresis

45. A 58-year-old woman is seen in the clinic for reports of severe back pain. Her chest x-ray demonstrates generalized bone demineralization and compression fracture. Blood studies demonstrate elevated calcium levels and renal insufficiency. The most likely diagnosis is:

a. Leukemia
b. Myeloma
c. Hodgkin disease
d. Back trauma
e. None of the above

46. A male patient 68 years of age was found to have generalized lymphadenopathy and hepatosplenomegaly. His Peripheral blood film showed lymphocytosis, with mature lymphocytes and smudge cells. The most likely diagnosis is?

a. Acute lymphoblastic leukaemia
b. Acute myeloid leukaemia
c. Chronic lymphocytic leukaemia
d. Chronic myeloid leukaemia
e. Multiple myeloma

47. A 45 yo woman presents with painless cervical lymphadenopathy for 6 months. She has no fever, sweats, or weight loss. Excisional biopsy reveals clonal population of small lymphocytes in the follicular growth pattern, with follicules of different shapes and sizes. Cytogenetic analysis would most likely demonstrate which of the following:

a. C-MYC Overexpression
b. P53 mutation
c. Cyclin D1 overexpression
d. Monosomy 7
e. Bcl-2 overexpression

48. A 40 year old man presents with marked splenomegaly. During his workup Complete Blood counts are performed which show total leukocyte count (TLC) 117 x 109 /L, Haemoglobin (Hb) 12.4 g/dL and Platelet count 253 x 109 /L. Differential leukocyte count shows small number of myeloblasts and promyelocytes with predominance of neutrophils, myelocytes and metamyelocytes. His LAP score (Leukocyte alkaline phosphatase score) is 8 (low). Which of the following best describes a major characteristic of this disorder?

a. Peak incidence at 9 years of age.
b. t (9;22) translocation.
c. Predilection of male sex.
d. Expansion of mature T lymphocytes.
e. Hypogammaglobulinemia.

Prader-Willi and Angelman's syndrome have different clinical features, however they both share a defect at the same location on the same chromosome. This is an example of which of the following phenomenon?

a. A variable expressivity
b. A Robertsonian translocation
c. Genetic heterogeneity
d. Genomic imprinting
e. A balanced translocation

33. Which one of the following transplacental infections is associated with sensorineural hearing loss, blindness, and periventricular calcifications?

a. Cytomegalovirus
b. Toxoplasmosis
c. Syphilis
d. Herpes genitalis
e. Rubella

34. Which of the following is the predominant immunoglobulin isotype secreted in the human MALT (mucosa-associated lymphoid tissues)?

a. IgA
b. IgD
c. IgE
d. IgG
e. IgM

35. TYPE IV hypersensitivity is involved in the pathogenesis of which of the following?

a. Arthus reaction.
b. Contact dermatitis.
c. Erythroblastosis foetalis.
d. Haemolytic transfusion ABO reaction.
e. Serum sickness.

36. A 3-year-old recent immigrant is diagnosed with primary tuberculosis. Her body produces T cells that do not have IL-12 receptors on their surface, and she is noted to have impaired development of Th1 T-helper cells. Which of the following cytokines would benefit this patient for granulomatous response?

a. IL-4
b. IL-17
c. IL-22
d. Interferon-gamma
e. TGF-beta

37. CD4 + T cells that respond to intracellular pathogens by recruiting and activating phagocytic cells are termed as:

a. antigen-presenting cells.
b. cytotoxic T lymphocytes.
c. Th0 cells.
d. Th1 cells.
e. Th2 cells.

38. A 19-year-old male is found to have pneumococcal pneumonia. This bacterium produces an IgA protease capable of cleaving the IgA antibodies. What is the most likely physiological consequence of such a protease?

a. Membrane attack complex formation is impaired
b. Opsonization and phagocytosis of pathogen cannot occur
c. Impaired adaptive immune system memory
d. Impaired antibody binding to mast cells
e. Impaired mucosal immune protection

39. A 6-month-old male an immune deficiency disorder is hospitalized with disseminated Mycobacterium avium complex. His history is significant for recurrent episodes of otitis media which responded poorly to antibiotics and episodes of severe thrush and diaper rash. Deficiencies of which aspect of the immune response could best account for the child's medical history?

a. B cells
b. B and T cells
c. Complement
d. Macrophages
e. Neutrophils

40. A 55-year-old Caucasian male presents for a routine colonoscopy. A polyp is found in the patient's transverse colon and is found to be cancerous on histological evaluation. Upon examination, it is found that these cancerous cells have decreased MHC class I expression on their surface. Which immune system cell is most capable of killing these tumor cells as innate defense?

a. Natural killer cells
b. B-cells
c. Macrophages
d. Eosinophils
e. Cytotoxic T-cells

24. The most important criterion of malignancy in a rectal tubular adenoma is:

a. Excessive mitotic activity of epithelial components of the tumor
b. Papillary overgrowth of epithelium, with loss of regular glandular pattern
c. Anaplasia and disorientation of cells comprising the epithelial growth
d. Invasion of the stalk or base of the polyp by the epithelial growth
e. The presence of multiple polypoid lesions

25. A 57-year-old female presents to general gynecology clinic for evaluation of a pelvic mass. The mass was detected on a routine visit to her primary care doctor during abdominal palpation. In the office, she receives a transvaginal ultrasound, which reveals a mass measuring 11 cm in diameter. In the evaluation of this mass, elevation of which tumor marker would be suggestive of an ovarian cancer?

a. S-100
b. CA-125
c. Beta-hCG
d. Alpha fetoprotein
e. CA-19-9

26. A 50-year-old woman is diagnosed with well-differentiated ductal carcinoma of the breast. There is no family history of cancer. Which of the following molecular abnormalities is most likely to be found in this setting?

a. Inactivation of one BRCA1 gene copy
b. Deletion of one p53 gene copy
c. Amplification of the ERBB2 (HER2) gene
d. Deletion of an RB gene locus
e. Fusion of BCR and C-ABL genes

27. Which of the following is not a Precancerous lesion?

a. Villous adenoma of colon
b. Leukoplakia of oral cavity
c. Nodular goitre
d. Atypical endometrial hyperplasia
e. Barrett esophagus

28. An 80-year-old man is diagnosed with invasive prostatic adenocarcinoma. Histologic grading of this patient's carcinoma is based primarily on which of the following criteria?

a. Capsular involvement
b. Extent of regional lymph nodes involvement
c. Pulmonary metastases
d. Degree of tumor differentiation
e. Volume of prostate involved by tumor

29. Staging of cancer is based on:

a. the size of primary lesion
b. the degree of differentiation of tumour cells
c. nuclear morphology
d. Pleomorphism
e. the number of mitoses within the tumour

30. A 51 year old woman delivers a full-term baby that has repeated vomiting of bile stained material. A flat plate of the abdomen reveals air in the stomach and proximal duodenum and no air in the remainder of the bowel. The maternal serum a-fetoprotein level is low. The baby has 46 chromosomes. The mechanism of the child's disease is most closely associated with which of the following?

a. A Mendelian disorder
b. A Robertsonian translocation
c. nondisjunction in meiosis
d. A point mutation of a nucleotide
e. A microdeletion disorder

31. While examining a 13 year old boy during a routine physical examination, you note bilaterally enlarged, non-tender testicles that do not transilluminate, a high arched palate, and a mid-systolic ejection click followed by a short murmur. You call the school counselor and find that the child has a moderately severe attention deficit syndrome. Which of the following studies would you recommend on this boy that would best explain all of the abnormalities noted on the examination?

a. Echocardiogram
b. Buccal smear
c. Serum gonadotropins
d. Identification of triplet repeat
e. Chromosome study on his father

A 43 year old woman with myasthenia gravis and taking pyridostigmine daily, presents with profound skeletal muscle weakness. You are unsure whether she is experiencing a cholinergic crisis or a myasthenic crisis, so you administer a diagnostic dose of parenteral edrophonium. Assume the patient was experiencing a cholinergic crisis, what is the most likely response to the edrophonium?

a. Hypertensive crisis from peripheral vasoconstriction
b. Myocardial ischemia and angina, from drug induced tachycardia and coronary vasoconstriction
c. Premature ventricular contractions from increased ventricular automaticity
d. Prompt improvement of skeletal muscle tone and function
e. Ventilatory distress

18. A female patient suffering from severe cystic acne that is not responsive to standard therapies has been prescribed a drug. During her counseling session she has been told that while taking this she must use an effective form of contraception for at least 1 month before, throughout the therapy and for 1 month after discontinuation of therapy due to drug's potential to cause teratogenicity. Which drug she has been most likely prescribed?

a. Azelaic Acid
b. Benzoyl peroxide
c. Brimonidine
d. Isotretinoin
e. Tetracycline

19. A patient taking an NSAID for several weeks for arthritis now complains of persistent heart burn. His physician adds a prostaglandin analog to prevent this symptom. Which one of the following drugs has been added to the treatment?

a. Alprostadil
b. Latanoprost
c. Misoprostol
d. Trovaprost
e. Unoprostone

20. A substance abuser administers cocaine and experiences CVS effects addition to the CNS stimulating effects for which the drug was used. What statement describes the mechanism by which the cocaine caused its main peripheral and CNS effects?

a. Activates α2 adrenergic receptors leading to increased NE release
b. Blocks NE reuptake via the amine pump
c. Directly activates postsynaptic α and β adrenergic receptors, leading to sympathomimetic responses
d. Inhibits MAO leading to increased intraneuronal NE levels
e. Prevents NE exocytosis

21. Cervical biopsy of a 30-year-old woman reveals invasive tumor containing areas of squamous epithelium, with pearls of keratin. In situ hybridization shows the presence of human papillomavirus type 16 (HPV-16) DNA within the tumor cells. Which of the following molecular abnormalities in this tumor is most likely related to infection with HPV-16?

a. Trapping of the RAS protein in a GTP-bound state
b. Increased expression of laminin receptor genes
c. Inability to repair DNA damage
d. Functional inactivation of the RB1 protein
e. Increased expression of epidermal growth factor receptor

22. Epstein Barr virus is most commonly associated with all of the following types of cancers and related conditions in humans, Except?

a. Burkitt's lymphoma
b. Hodgkin's disease
c. Kaposi's sarcoma
d. Nasopharyngeal carcinoma
e. Oral hairy leukoplakia

23. A 47 year old woman is suffering from gastritis for more than 3 years. She reported weight loss of more than 15 kg in last three months. A stomach ulcer was confirmed from endoscopy. Which of the following microbe could be the possible pathoge that has also been associated with gastrointestinal cancer mostly in developing countries?

a. Hepatitis A
b. Hepatitis C
c. Human papillomavirus
d. Helicobacter pylori
e. Enterococcus faecalis

8. A 25 years old woman underwent kidney transplantation. A week later she developed acute humoral rejection. She was successfully treated with tacrolimus and a second drug that targets both B and T lymphocytes. Which of the following is an immunosuppressant that suppresses both B and T lymphocytes via inhibition of de novo synthesis of purines?

a. Cyclophosphamide
b. Methotrexate
c. Mycophenolate mofetil
d. Prednisone
e. Tacrolimus

9. Which one of the following corticosteroids is preferred for oral and parenteral therapy (respectively) for acute gout?

a. Dexamethasone; Hydrocortisone
b. Dexamethasone; Triamcinolone
c. Hydrocortisone; Dexamethasone
d. Prednisone; Hydrocortisone
e. Prednisone; Triamcinolone

10. A patient with acute lymphocytic leukemia is responding well to Mercaptopurine therapy. However when Allopurinol is added to the regimen to decrease uric acid production, the patient develops toxic symptoms. Which one of the following is the most likely reason of development of toxicity?

a. Allopurinol competes with Mercaptopurine for renal excretion
b. Allopurinol decreases the enterohepatic recycling of Mercaptopurine
c. Allopurinol decreases the plasma protein binding of Mercaptopurine
d. Allopurinol has same toxic effects as Mercaptopurine
e. Allopurinol inhibits the metabolism of Mercaptopurine

11. Which of the following options represent the claimed use of ginseng?

a. Helps to prevent cold and lowers postprandial glucose
b. Lowers blood pressure and restores thyroid function
c. Possess antiplatelet activity and has anticoagulant effect
d. Useful in treatment of depression and bipolar disorder
e. Used as an analgesic

12. A patient is given an injection of penicillin. In a few minutes he starts feeling dizzy and crashes to the floor. On examination his blood pressure is very low and pulse is rapid. Which one of the following drugs will be given to treat this patient?

a. Adrenaline
b. Atropine
c. Dexamethasone
d. Dopamine
e. Dobutamine

13. A 40 years old male who is also a chronic smoker is taking a beta blocker for hypertension. Now he has developed COPD. His physician however decides not to change his antihypertensive medication since it will not aggravate his symptoms. Which one of the following beta blockers the patient is most likely taking?

a. Atenolol
b. Celiprolol
c. Nadolol
d. Propranolol
e. Timolol

14. Which one of the following is not an adverse effect of alpha adrenoceptor blockers?

a. Miosis
b. Nasal stuffiness
c. Reflex tachycardia
d. Retention of urine
e. Sexual dysfunction

15. Which one of the following conditions is an accepted clinical use of antimuscarinic drugs?

a. Alzheimer's disease
b. Chronic Obstructive Pulmonary Disease
c. Glaucoma
d. Hypertension
e. Supraventricular Tachycardia

16. During surgery the anesthesiologist administers trimethaphan to an anesthetized patient. What effect would be expected in response to this drug?

a. Bradycardia mediated by activation of the baroreceptor reflex
b. Increased GI tract motility, possible spontaneous defecation
c. Increased salivary secretions
d. Miosis
e. Vasodilation