Ques. Paper : Assistant Professor - Pathology

Mode of Exam: Online
Date of Exam: 12-07-2015
Duration of Exam: 2 hours
No of Questions: 100

Ques # : 1

Which of the following test parameter is not affected by diurnal variation:
1) Cortisol
2) Cholesterol
3) Growth hormone
4) Iron

Ques # : 2

Which of the following feature does not match with given pediatric round cell tumour:
1) Neuroblastoma: neuropil
2) Ewing’s sarcoma: glycogen vacuoles
3) Burkitt’s lymphoma: LG bodies, dense blue vacuolated cytoplasm
4) Rhabdomyosarcoma: Flexner-Wintersteiner rosettes

Ques # : 3

Which one of the following is a false statement about Neutrophil Extracellular Trap (NETs):
1) They are extracellular fibrillar networks preventing spread of microbes by trapping them
2) They provide high concentration of antimicrobial substances at site of infection
3) Neutrophils remain alive after producing the network
4) The network contains nuclear chromatin
Ques # :4

**Fatty change in the liver in alcoholics is most likely associated with:**
1) Reduced formation of acetyl-CoA
2) Reduction in lipolysis in adipose tissue
3) Increased β- oxidation of fatty acid
4) Increased synthesis of glycerol 3-phosphate

Ques # :5

**Hyperplasia rather than metaplasia is best represented by:**
1) Benign squamous epithelium lining the true vocal cord
2) Bone in area of previous muscle injury
3) Increased goblet cells in the bronchus of a smoker
4) Increased goblet cells in stomach mucosa

Ques # :6

**In which of the following groups of chemical mediators, both are vasodilators?**
1) Histamine and tumour Necrosis Factor (TNF)
2) C3a and LTB4
3) Interleukin-1 and thromboxane A2
4) Prostacyclin (PGI2) and C5a

Ques # :7

**Which of the following groups of diseases fall into the same hypersensitivity reaction classification:**
1) Allergic rhinitis and poison ivy
2) Graves’ disease and Goodpasture’s syndrome
3) ABO incompatibility and skin reaction to bee sting
4) Hyperacute transplant rejection and serum sickness

Ques # :8

**In which one of the following oncogene groupings are both oncogenes activated by translocation:**
1) abl and c-myc
2) ras and erbB2
3) sis and N-myc
4) erbB2 and abl
Ques # : 9

In which of the following groups of chemical mediators are both mediators involved in the synthesis of adhesion molecules and chemotaxis?

1) C3b and Hageman factor XII  
2) C5a and LTB4  
3) LTC4 and histamine  
4) C3a and platelet activating factor

Ques # : 10

Electron microscopy is useful for all of the following diagnostic purposes except:

1) Identifying viruses in tissues  
2) Classifying a lymphoma as B cell or T cell type  
3) Making a diagnosis of Whipples disease  
4) Identifying immune complexes in renal glomerulonephritis

Ques # : 11

Large irregular densities and apparent cavitation with air fluid levels are noted on the chest x-ray of coal miner. These findings are most suggestive of:

1) Chronic silicosis with egg shell calcification  
2) Superimposed tuberculosis  
3) Simple coal worker pneumoconiosis  
4) Asbestosis

Ques # : 12

Which description is true of the class II Major Histo-Compatibility complex:

1) It includes HLA loci A,B and C  
2) It consists of a single transmembrane glycoprotein chain  
3) It has beta 2 microglobulin as part of its glycoprotein structure  
4) It presents antigens derived from Extracellular microbes & soluble proteins to CD4 Cells

Ques # : 13

A biopsy of renal allograft shows fibrinoid necrosis of small vessels. Which of the following mechanisms is most likely responsible.

1) Cell mediated cytotoxicity  
2) Antibody and complement mediated damage  
3) CD8 mediated damage  
4) Natural killer cell mediated cytotoxicity
Ques # : 14

Transformation to acute leukemia may occur during the course of all of the following except:
1) Polycythemia vera
2) Chronic myelogenous leukemia
3) Hodgkins disease
4) Myelofibrosis

Ques # : 15

CSF cytology is not useful for the diagnosis of:
1) Leukemia
2) Medulloblastoma
3) Ependymoma
4) Meningioma

Ques # : 16

Which of following is not a type of paracortical lymphoid hyperplasia:
1) Castleman disease
2) Angioimmunoblastic lymphadenopathy
3) Dermatopathic lymphadenopathy
4) Dilantin lymphadenopathy

Ques # : 17

Which one of the following has an anti-apoptotic effect:
1) BCL-2
2) p53
3) BAX
4) BAK

Ques # : 18

Which of the Adhesion Molecule-Ligand pair (on Endothelial Cells & Leukocytes) does not match:
1) P-Selectin : Sialyl-Lewis-X
2) ICAM-1 : MAC-1
3) E-Selectin : PECAM-1
4) VCAM-1 : VLA-4
Ques # :19

**Binding of IgE Antibody to Mast Cell Surface IgE Fc receptors in Type I hypersensitivity leads to following events except :**

1) Signal for Degranulation  
2) Signal for Apoptosis  
3) Signal for Activation of Phospholipase A2  
4) Signal for Cytokine Secretion

Ques # :20

A 5-year old boy has recurrent Staphylococcus aureus infections. His Peripheral Blood Leukocytes are normal in appearance. The Nitro Blue Tetrazolium (NBT) dye test is abnormal. Which of the following best describes the pathogenesis of the disease :

1) Deficiency of NADPH oxidase  
2) Defect in microtubule polymerization  
3) Deficiency of C3 & Ig  
4) Deficiency of Myeloperoxidase

Ques # :21

Both chronic bronchitis and emphysema are associated with-

1) Respiratory acidosis  
2) Severe ventilation/perfusion (V/Q) mismatch  
3) A low PaO2  
4) Irreversible destruction of the respiratory unit

Ques # :22

Which of the following disorder will most likely show a normal percentage of Eosinophils in the peripheral blood?

1) Strongyloidiasis  
2) Hookworm infestation  
3) Contact dermatitis  
4) Drug allergy

Ques # :23

Which of the following diseases or physical diagnostic findings is least likely to be associated with amyloidosis?

1) Congestive cardiomyopathy  
2) Peripheral neuropathy  
3) Nephrotic syndrome
4) Alzheimer’s disease

Ques # :24

**Which of the following infectious disease relationships is correctly matched?**
1) Shigellosis: bradycardia, neutropenia, splenomegaly
2) Campylobacter jejuni: secretory diarrhea
3) Enterohemorrhagic Escherichia coli: Haemolytic uremic syndrome
4) Vibrio cholerae: mucosal ulceration

Ques # :25

A patient who is taking hydrochlorothiazide abruptly develops fever, rashes, and oligouria. Additional studies reveal an increase in the serum BUN and creatinine, Eosinophilia and urine analysis with positive dipstick test for protein (2+). No casts are present. The mechanism for this patient’s disease is most closely related to-
1) Immune-complex deposition in the glomeruli
2) Obstructive uropathy
3) Type IV cellular immune reaction
4) Antiglomerular basement membrane antibodies

Ques # :26

An obese 24-year old woman presented with long history of oligomenorrhea and hirsutism. She has palpable bilateral ovarian masses. An ultrasound of her ovaries would likely reveal-
1) Serous cystadenomas
2) Cystic teratoma
3) Subcortical cysts in both ovaries
4) Bilateral endometriosis

Ques # :27

A 62-year-old woman who presents with colicky right flank pain is noted to have a renal stone in right ureter. A biochemical profile shows abnormalities in her serum calcium, phosphorus, and electrolytes. Which of the following tests most likely confirm the cause of her renal stone?
1) 24-hour urine collection for calcium
2) 24-hour urine collection for phosphorus
3) Bone scan
4) Serum Parathormone level

Ques # :28
In diabetes mellitus, non-enzymatic glycosylation is most likely operative in the pathogenesis of
1) Peripheral neuropathy
2) Microaneurysm in the retina
3) Cataracts
4) Hyaline arteriosclerosis

Ques # :29

The mechanism of postmenopausal osteoporosis is most closely associated with-
1) A reduction in number of osteoblasts
2) An increase in number of osteoclasts
3) Decreased mineralization of bone
4) Greater osteoclastic than osteoblastic activity in bone

Ques # :30

A 3-year old boy who was normal at birth, is having difficulty in standing up and must push with his hand on his knees in order to stand. He has peculiar duck-like walk. The pathogenesis of his disease is most closely related to-
1) An autosomal recessive disease
2) Triplet repeats on the X-chromosome.
3) Defective anchorage of actin to the membrane glycoprotein
4) A congenital myopathy

Ques # :31

Which of the following lymph node relationships is correct?
1) Syphilis: spirochetes rarely identified in primary and secondary types
2) Rheumatoid arthritis: sinus histiocytosis is a marker of increased disease activity
3) Cat-scratch disease: granulomatous micro-abscesses are similar to Lymphogranuloma venereum
4) Dermatopathic lymphadenitis: is commonly associated with vaccination

Ques # :32

All of the following statements about Infective Endocarditis are true except:
1) It is most commonly caused by gram negative bacteria
2) It most commonly involves previously damaged valves
3) Valve perforation may occur
4) It is fatal if not treated
Ques # :33

**Mitral valve prolapse is characterized by all of the following except:**
1) Prolapse of mitral valve leaflets into left ventricular cavity
2) An excess of mucopolysaccharide in valve spongiosa, which progressively replaces the valve fibrosa
3) Fibrillin-1 (FBN-1) mutations in few cases
4) A mid-systolic click or murmur

Ques # :34

**All of the following agents contribute to kidney regulation of systemic blood pressure except:**
1) Renin angiotensin system
2) Aldosterone
3) Kallikrein-Kinin system
4) Lymphokines

Ques # :35

**Of the lung tumours, which type belongs to amine precursor uptake and decarboxylation (APUD) group of tumours:**
1) Large Cell Anaplastic Carcinoma
2) Mucoepidermoid carcinoma
3) Adenoid cystic carcinoma
4) Small Cell Carcinoma

Ques # :36

**Glomus tumours originate in structures that are responsible for which function:**
1) Blood pressure regulation
2) Temperature regulation
3) Taste sensation
4) Tactile sensation

Ques # :37

**Hirschsprung disease usually is caused by congenital absence of ganglion cells in which segment of the large intestine:**
1) Caecum
2) Ascending colon
3) Transverse colon
4) Rectum
Ques # :38

**All of the following statements about pancreatic adenocarcinoma are true except:**
1) It locally invades adjacent structures but rarely metastasizes to more distant sites
2) It may present as acute pancreatitis
3) Jaundice often is present particularly with tumours of pancreatic head
4) Back pain is common symptom

Ques # :39

**Which statement best characterizes membranous glomerulopathy:**
1) It is most common cause of nephritic syndrome in children
2) Affected patients usually present with acute renal failure
3) The characteristic pathology is best described as diffuse proliferative glomerulonephritis
4) Electron Microscopy demonstrates numerous sub-epithelial immune deposits

Ques # :40

**In most cases of non-obstructive chronic pyelonephritis, bacteria reach kidney via:**
1) Blood stream
2) Lymphatics
3) Batson plexus
4) Vesico-ureteral reflux

Ques # :41

**Which statement is true of prostatic cancer:**
1) It most commonly arises in periurethral location
2) It is associated with an elevated hCG serum level
3) Bone is most common metastatic site
4) Most prostate cancers are sarcomas

Ques # :42

**All of the following statements about choriocarcinoma are true except:**
1) It may occur after normal pregnancy
2) It can arise in Vesicular mole
3) It consists of malignant trophoblasts
4) It is treated with hysterectomy and radiation therapy

Ques # :43
MEN syndrome type II b has all of the following components except:
1) Pheochromocytoma of adrenal gland
2) Medullary carcinoma of thyroid gland
3) Mucosal Neuromas
4) Pituitary adenoma

Ques # :44

All of the following statements concerning Alzheimer disease are true except:
1) Associated with accumulation of Aβ protein & tau protein
2) Cerebellar atrophy is prominent
3) Neurofibrillary tangles are prominent
4) Disease is prolonged and progressive

Ques # :45

Chordomas are nervous system neoplasms that have all of the following except:
1) Occurs in childhood
2) Location in sacrococcygeal region
3) Slow growth & prolonged Clinical Course
4) IHC shows Brachyury positivity

Ques # :46

Adenoid cystic carcinoma is tumour of salivary gland that is characterized by:
1) Frequent involvement of parotid glands
2) Nerve invasion
3) Grossly cystic appearance
4) Short survival in affected patients

Ques # :47

Which prognostic factor is most useful for primary malignant melanoma:
1) Breslow Thickness
2) Size of malignant cells
3) Number of multinucleated giant cells
4) Degree of surrounding inflammation

Ques # :48

A young woman is diagnosed as having sarcoma botryoides of bladder. All of the following are true except:
1) Grossly shows a polypoid growth
2) Specific chemotherapy is effective
3) Tumour with cambium layer
4) Tumour of myofibroblasts

Ques # :49

All of the following except one are criteria for Antibody mediated rejection of solid organ allograft:
1) Capillary deposition of C4d
2) Capillary endothelial activation
3) IgE deposition
4) Microvascular inflammation

Ques # :50

All of the following are examples of molecular alteration in non-small cell lung carcinoma (NSCLC) being the target of targeted therapy, except:
1) EGFR kinase domain mutation
2) bcr- abl fusion
3) EML4/ALK fusion
4) K-ras mutation

Ques # :51

Which one of the following statements is not true about Hepatocellular adenoma:
1) Main risk factor is exposure to estrogen or androgen
2) It can transforms to hepatocellular carcinoma
3) It is always single
4) β-catenin mutation and HNF-1 mutation can be seen in some of the types

Ques # :52

Which one of the following is not a preferred method for HPV test in cervical smear screening:
1) ELISA
2) Hybrid capture
3) Real time PCR
4) Invader probe chemistry

Ques # :53

Following is not true about Tensin family of genes:
1) They are regulator of cell migration
2) They have role in regulation of apoptosis
3) They are derived from complements
4) They can act as tumour suppressor gene

**Ques # :54**

**Which one is a false statement about Barrett’s oesophagus:**
1) Replacement of lower oesophageal squamous mucosa by metaplastic glandular mucosa
2) Gastro-oesophageal reflux disease is an initiating factor
3) H. pylori infection of stomach is a risk factor
4) It is more common in overweight males

**Ques # :55**

**Which one of the following enzymes has role in regulation of extracellular matrix and progression of neoplasm:**
1) Hyaluronidase
2) α-1 antitrypsin
3) Endonuclease
4) Matrix metalloproteinases

**Ques # :56**

**In which respect Gastro-intestinal Stromal tumour (GIST) is similar to Chronic Myeloid Leukemia (CML):**
1) CD-117 positivity
2) Origin from Interstitial cells of Cajal
3) Responsiveness to Imatinib as Targeted therapy
4) Association with massive splenomegaly

**Ques # :57**

**Which of the following is not included in laboratory criteria of diagnosis of Anti-phospholipid Syndrome?**
1) Anti-factor Xa activity
2) Lupus anticoagulant
3) Anti-cardiolipin antibodies
4) Anti β-2 GP-1 antibodies

**Ques # :58**

**Which of the following is not an associated risk factor of Coronary Artery Disease:**
1) Sedentary life style
2) Raised Hs-CRP
3) High homocysteine levels
4) High serum HDL level

Ques # :59

**Which of the enzymes is not involved in free radical scavenging systems**
1) Phospholipases
2) Superoxide dismutases
3) Catalase
4) Glutathione Peroxidase

Ques # :60

**Pro-apoptotic proteins are :-**
1) bcl 2-bcl xL
2) bcl 2 - Mcl-1
3) Bax and Bak
4) Ced 9

Ques # :61

**Which stain is used in frozen section of liver tissue for demonstration of fat**
1) Mucicarmine
2) Periodic Acid Schiff
3) Alcian blue
4) Oil Red O

Ques # :62

**The pigment deposited in collagen of connective tissue in ochronosis is**
1) Melanin
2) Hemosiderin
3) Homogentisic acid
4) Lipofuscin

Ques # :63

**Which cytokine regulates the expression of Selectins on endothelium and leucocytes**
1) Interleukin 6
2) Tumour Necrosis Factor and Interleukin 1
3) Chemokines
4) Interferon gamma
Ques # :64

Which inherited disease is related with defects in phagolysosome function
1) leukocyte adhesion deficiency
2) Chronic granulomatous disease
3) Chediak Higashi Syndrome
4) MPO deficiency

Ques # :65

Which one of the following statements is NOT correct.
1) Familial amyloidotic neuropathy is associated with increase in Transthyretin
2) Primary amyloidosis is associated with immunoglobulin Light chains
3) Hemodialysis amyloidosis is associated with Transthyretin
4) Familial Mediterranean fever is associated with increase in Amyloid Associated protein

Ques # :66

Which of the complement components act as a chemoattractant
1) C 4 b
2) C 4 a
3) C 3 b
4) C 5 a

Ques # :67

Which one is NOT an Acute phase protein
1) Fibrinogen
2) Transferrin
3) C - reactive protein
4) Serum Amyloid A protein

Ques # :68

Which one of the collagens is NOT a fibrillar collagen
1) Type I
2) Type II
3) Type IV
4) Type III

Ques # :69
Which of the following cell adhesion proteins provides connection between cells and extracellular matrix
1) Integrins
2) Selectins
3) Cadherins
4) Immunoglobulin cell adhesion molecule

Ques # :70

Which one of the following growth factor receptor is NOT associated with intrinsic tyrosine kinase activity
1) EGF
2) G-Protein coupled receptor
3) TGF-α
4) PDGF

Ques # :71

Ki-67 nuclear protein is NOT expressed by cells in which phase of cell cycle
1) G1 Phase
2) G0 Phase
3) M Phase
4) S Phase

Ques # :72

Intraepidermal bullae are not associated with
1) Pemphigus Vulgaris
2) Hailey Hailey disease
3) Bullous Pemphigoid
4) Spongiotic dermatitis

Ques # :73

In which of the skin lesion, grains and corps ronds are found
1) Darier disease
2) Acanthosis Nigricans
3) Seborrhoeic dermatitis
4) Psoriasis

Ques # :74

Which of the following immunohistochemistry markers is specific for basal cell carcinoma
of the skin
1) EMA
2) CEA
3) Ber-EP4
4) CD34

Ques # :75

Which one of the immunohistochemistry markers is NOT a positive marker for Mesothelioma of the pleura
1) Calretinin
2) WT-1
3) Cytokeratin 5/6
4) CEA

Ques # :76

Which one is not associated with Kartagener's syndrome
1) Emphysema
2) Bronchiectasis
3) Complete situs inversus
4) Infertility

Ques # :77

Which one of the following pairs is NOT wrongly matched
1) Anthracosis - Coal dust
2) Silicosis - Quartz
3) Pleural plaques - Asbestos
4) Siderosis - beryllium

Ques # :78

Which of the following is NOT correctly matched.
1) All transretinoic acid-AML-M3, t(15;17)
2) trastuzumab - Her-2/neu +ve breast cancer
3) Imatinib - CML t(9;22)
4) Gefitinib - NSCLC Alk Positive lung cancer

Ques # :79

Pendred Syndrome is characterised by following EXCEPT
1) hypothyroidism
2) Germline mutation in TTF-2
3) sensorineural deafness
4) mutation in SLC 26A4 gene

Ques # :80

**Medullary carcinoma thyroid is characterised by all EXCEPT**
1) It arises from C-cells
2) Amyloid deposition
3) Thyroglobulin positive
4) Calcitonin positivity

Ques # :81

**Which of the following is NOT a specific Immunomarker for Gastrointestinal stromal tumour(GIST).**
1) Desmin
2) CD34
3) CD117
4) DOG-1

Ques # :82

**Which one of the Intestinal polyposis Syndromes is associated with an increased risk of malignancy of the colon**
1) Cowden Syndrome
2) Peutz - Jeghers Syndrome
3) Juvenile polyposis
4) Familial adenomatous polyposis

Ques # :83

**Familial adenomatous polyposis is associated with mutation of which gene.**
1) MSH2/MLH1
2) APC
3) P53
4) K-ras

Ques # :84

**Which one is not associated with unconjugated hyperbilirubinemnia**
1) Hemolytic anaemia
2) Crigler Najjar Syndrome
3) Dubin- Johnson Syndrome
4) Gilbert Syndrome

Ques # :85

**Which of the serological markers in Hepatitis B is indicative of highly infectious state.**
1) HBeAg
2) Anti HBe antibody
3) HBsAg
4) Anti HBc antibody

Ques # :86

**Which immunologic marker is used to differentiate liver cell Adenoma from hepatocellular Carcinoma.**
1) EMA
2) Pan-Cytokeratin
3) Glypican 3
4) MOC 31

Ques # :87

**Which of the following is NOT included in Metabolic Syndrome**
1) Obesity
2) Microalbuminaemia
3) Hypertension
4) Increase high density Lipoproteins

Ques # :88

**An intact endothelium elaborates all antithrombotic factors EXCEPT.**
1) Thrombomodulin
2) Heparin like molecule
3) Thromboplastin
4) Tissue Factor pathway Inhibitor

Ques # :89

**What is the classic pattern of Karyotype in Klinefelter Syndrome.**
1) 47XXY
2) 45XO
3) 48XXXXY
4) 47XXX
Ques # :90

**Following are the causes of Left heart failure EXCEPT.**
1) Ischemic heart disease
2) Hypertension
3) Cor pulmonale
4) Aortic Valvular disease

Ques # :91

**Accelerated phase in chronic Myelogenous Leukaemia is characterised by following EXCEPT.**
1) Increase blast cells >= 20%
2) Peripheral blood basophilia >= 20%
3) Duplication of Ph chromosome
4) Progressive Splenomegaly

Ques # :92

**Which of the following tests is used for identification of nature of M-protein in Multiple Myeloma.**
1) Urine electrophoresis
2) Single radial Immunodiffusion
3) Immunofixation
4) Serum Protein electrophoresis

Ques # :93

**According to WHO criteria for diagnosis of plasma cell myeloma, which statement is correct for plasma cells in bone marrow.**
1) less than 10%
2) 10% or more
3) more than 20%
4) more than 15%

Ques # :94

**Granuloma in the lung are not seen in -**
1) Berylliosis
2) Asbestosis
3) Sarcoidosis
4) Tuberculosis
Ques # :95

**Viral pneumonias are characterised by**
1) Alveolar Exudates of neutrophils, fibrin
2) Interstitial infiltrates
3) Bronchiolitis mainly
4) No inflammatory cell reaction in lung parenchyma

Ques # :96

**Main common lung cancer in non smokers**
1) Adenocarcinoma
2) Squamous cell carcinoma
3) Small cell carcinoma
4) Large cell carcinoma

Ques # :97

**Which chronic lung disease does not result in Cor pulmonale**
1) Chronic bronchitis and emphysema
2) Anthracosis
3) Bronchial Asthma
4) Extensive interstitial pulmonary fibrosis

Ques # :98

**NESTROF test is used for screening of which disease in India**
1) Malaria
2) Hepatitis
3) Sickle cell Anaemia
4) Thalassemia

Ques # :99

**Which of the following is an example of allergic purpura.**
1) Ehler Danlos Syndrome
2) Henoch-Schonlein purpura
3) Senile purpura
4) Marfan's Syndrome

Ques # :100

**Heinz bodies are observed in peripheral blood in cases of**
1) G6PD Deficiency
2) Pyruvate kinase deficiency
3) Lead Poisoning
4) Pyrimidine 5 nucleotidase deficiency