

## PATHOLOGY

1. A performed mediator of inflammation is
  - A. Prostaglandin
  - B. Histamine
  - C. Leukotriene
  - D. Nitric oxide
  - E. Platelet activating factor
  
2. In normal haemostasis
  - A. Factor V inhibits thrombosis
  - B. Alpha 2 microglobulin is antithrombotic
  - C. PGI<sub>2</sub> favours platelet aggregation
  - D. Platelet aggregation is inhibited by von Willebrand factor
  - E. Tissue plasminogen activator is responsible for prothrombotic events
  
3. Mononuclear phagocytes
  - A. Are the predominant cells in three day old wounds
  - B. Are common in liver, spleen and pancreas
  - C. Produce fibroblast growth factor
  - D. Secrete interferon  $\gamma$
  - E. Have a half life of one day
  
4. Normal endothelial cells decrease platelet aggregation by secreting
  - A. Interleukin 1
  - B. von Willebrand factor
  - C. Prostacyclin
  - D. Factor V
  - E. Thromboplastin
  
5. Interleukin 1 causes
  - A. Neutropaenia
  - B. Decreased sleep
  - C. Decreased prostaglandin synthesis
  - D. Increased collagen synthesis
  - E. Decreased leukocyte adherence
  
6. Thrombosis is potentiated by all of the following except
  - A. von Willebrand factor deficiency
  - B. Protein S deficiency
  - C. Antithrombin III deficiency
  - D. Thrombotic thrombocytopenia
  - E. Acute leukaemia

7. Acute compensatory mechanisms in shock include all of the following except
- A. Baroreceptor reflexes
  - B. Reverse stress-relaxation of vascular smooth muscle
  - C. The effects of increased aldosterone secretion
  - D. Activation of the renin-angiotensin system
  - E. The central nervous system ischaemic response
8. The following are primary mediators of type I hypersensitivity reactions except
- A. Adenosine
  - B. Neutrophil chemotactic factor
  - C. Heparin
  - D. Platelet activating factor
  - E. Acid hydrolases
9. Malignant neoplasms
- A. Are independent of hormonal influence
  - B. Are always composed of homogeneous cell lines
  - C. Arise from differentiated cells by a process of anaplasia
  - D. Display abnormal nuclei with pale nucleoli
  - E. Typically grow more rapidly than benign
10. Regarding metastasis
- A. All carcinomas have the ability to metastasise
  - B. Highly invasive carcinomas rarely metastasise
  - C. Carcinomas typically spread via lymphatics compared with haematogenous spread
  - D. Tumour cells develop increased cohesiveness of their cell surface in the formation of cancer cell emboli
  - E. Cells involved in lymphatic dissemination release degradative enzymes
11. HIV infection
- A. Is caused by rhinovirus
  - B. Results in increased CD<sub>4</sub> and T cell memory
  - C. Results in inversion at the CD<sub>4</sub>-CD<sub>8</sub> ratio
  - D. Increases immature precursors of CD<sub>4</sub> and T cells
  - E. Causes a CD<sub>4</sub>-CD<sub>8</sub> ratio close to 2
12. A typical feature of AIDS
- A. Decreased delayed type hypersensitivity reaction
  - B. Lymphocytosis
  - C. Hypogammaglobulinaemia
  - D. Increase CD<sub>4</sub> and T cells
  - E. Increase chemotaxis and phagocytosis

13. In reversible cell injury, all are true except
- A. ATP depletion is responsible for acute cellular swelling
  - B. Can cause myocardial cells to cease contraction within 60 seconds
  - C. ATP is generated anaerobically from creatine phosphate
  - D. Mitochondrial swelling and degranulation of ER are the hallmarks of irreversible cellular damage
  - E. Is associated with myelin figures
14. Metaplasia
- A. Is irreversible
  - B. Is commonly a change from squamous to columnar epithelium
  - C. An example is the transformation of epithelial cells into chondroblasts to produce cartilage
  - D. Retinoids may play a role
  - E. Even if the stimuli is persistent, it is a benign lesion
15. In apoptosis
- A. It involves physiologic and pathologic stimuli
  - B. Histologically, it involves coagulation necrosis
  - C. Its DNA breakdown is random and diffuse
  - D. Its mechanism involves ATP depletion
  - E. It involves an inflammatory tissue reaction
16. Hyperplasia
- A. Occurs after partial hepatectomy
  - B. Refers to an increase in the size of cells
  - C. Is always a pathologic process
  - D. Often occurs in cardiac and skeletal muscle
  - E. Usually progresses to cancerous proliferation
17. Metastatic calcification
- A. Causes widespread tissue damage
  - B. Occurs with normal calcium levels
  - C. Can be caused by systemic sarcoidosis
  - D. Occurs in hypothyroidism
  - E. Is caused by drinking large quantities of milk
18. Mumps virus is a
- A. Adenovirus
  - B. Herpes virus
  - C. Paramyxovirus
  - D. Pox virus
  - E. Picornavirus

19. Prothrombotic characteristics of endothelium include
- A. Plasminogen activator
  - B. Prostacyclin
  - C. von Willebrand factor
  - D. Thrombomodulin
  - E. Heparin like molecules
20. Regarding giant cell arteritis, which statement is not correct
- A. Affects medium arteries
  - B. Affects small arteries including vertebral
  - C. Affects small arteries including ophthalmic
  - D. Has an increased prevalence of HLA-DR<sub>4</sub>
  - E. Has no gastrointestinal manifestations
21. All of the following organisms cause a clinical effect via the production of an exotoxin except
- A. Clostridium tetani
  - B. Staphylococcus aureus
  - C. E. coli
  - D. Pseudomonas aeruginosa
  - E. Vibrio cholera
22. Select the true statement concerning atherosclerosis
- A. Congenital absence of LDL cholesterol leads to premature atherosclerosis
  - B. Thoracic aorta is more likely to be involved than the abdominal
  - C. Fatty streaks appear in the aortas of children as young as 1 year
  - D. Fatty streaks are destined to become atherosclerotic plaques
  - E. Endothelial disruption always precedes atheroma development
23. Select the false statement concerning atherosclerosis
- A. Familial hypercholesterolaemia is associated with inadequate hepatic uptake of LDL
  - B. CMV has been detected in human atheromatous plaques
  - C. Fibrous atheromatous plaques are capable of regression
  - D. Foam cells can be considered to be specialised macrophages
  - E. Atherosclerosis is associated with medial calcific sclerosis
24. An infectious complication of transfusion
- A. Is most commonly Hepatitis C
  - B. Is most commonly Hepatitis B
  - C. Is rarely transmission of HIV since screening was instituted
  - D. Never includes gonorrhoea or malaria
  - E. Can be clinically apparent mononucleosis in about 7% of cases

25. Which of the following is true concerning rhabdomyolysis
- A. It is caused by injury to smooth muscle
  - B. Its diagnosis depends on the presence of characteristic physical findings
  - C. The final common pathway of injury involves damage to the sarcolemma
  - D. Renal failure is due to acute glomerular nephritis
  - E. Occurs only in trauma
26. Neutrophilia is generally caused by all of the following except
- A. Inflammatory disease
  - B. Bacterial infection
  - C. Viral infection
  - D. Corticosteroids
  - E. Stress
27. Which of the following is true of chronic myeloid leukaemia
- A. Most common leukaemia
  - B. Decreased leukocyte alkaline phosphatase level
  - C. Usually occurs in patients less than 40 years old
  - D. Increased WBC count with an abnormal differential
  - E. Rarely associated with the Philadelphia chromosome
28. All of the following are cardiac compensatory responses that occur in heart failure except
- A. Cardiac muscle fibre stretching
  - B. Increased adrenergic receptors on cardiac cells
  - C. Chamber hypertrophy
  - D. Decreased heart rate
  - E. Increased vasopressin levels
29. Shock in burn patients is primarily due to
- A. Neurogenic factors
  - B. Hypovolaemia
  - C. Acute erythrocyte haemolysis
  - D. Myocardial depression factor
  - E. All of the above
30. The immediate lethal dose of radiation exposure for humans in a non-mass casualty situation is
- A. 50 rads
  - B. 150 rads
  - C. 250 rads
  - D. 350 rads
  - E. 450 rads

31. With regard to apoptosis, which of the following is incorrect
- A. it may be regarded as a normal physiological process
  - B. it is characterised by chromatin condensation
  - C. it often elicits a strong inflammatory response
  - D. it is the process by which ovaries atrophy in post menopausal women
  - E. it is characterised by cell shrinkage
32. With regard to the acute inflammatory response, which is the most common mechanism of vascular leakage
- A. endothelial cell contraction
  - B. junctional retraction
  - C. direct injury
  - D. leukocyte-dependent leakage
  - E. regenerating endothelium
33. With regard to cellular injury, all of the following are reversible except
- A. decreased ATP
  - B. intracellular release of lysosomal enzymes
  - C. decreased Na pump activity
  - D. detachment of ribosomes
  - E. ER swelling
34. With regard to the role of complement in the acute inflammatory response, which of the following is incorrect
- A. C5a is a powerful, chemotactic agent for neutrophils, monocytes and eosinophils
  - B. C5a increases leukocyte adhesion to endothelium by activating leukocytes
  - C. C3a and C5a are called anaphylatoxins because they cause mast cell degranulation
  - D. C3a activates the lipoxygenase pathway in leukocytes
  - E. C3 and C5 can be activated in inflammatory exudate by lysosomal enzymes
35. Coagulative necrosis
- A. results from necrosis in which cellular enzymatic digestion predominates over denaturation
  - B. is characterised by a marked leukocytic infiltrate
  - C. is uncommon after myocardial infarction
  - D. usually occurs after irreversible ischaemic cellular damage
  - E. is not usually seen in association with caseous necrosis
36. Granulomatous inflammation
- A. may sometimes be a component of the acute inflammatory response
  - B. indicates the presence of tuberculosis
  - C. consists, in part, of microscopic aggregates of transformed lymphocytes
  - D. is always associated with the presence of giant cells
  - E. may result from non-immune mechanisms

37. Removal of sutures from a wound at day 7 coincides with a wound strength of
- A. 1% of unwounded skin strength
  - B. 10% of unwounded skin strength
  - C. 50% of unwounded skin strength
  - D. 75% of unwounded skin strength
  - E. 100%, ie. same as unwounded skin
38. In a healthy individual over the age of 5 years, lymphocytes are mainly found in
- A. bone marrow, thymus, spleen
  - B. liver, thymus, spleen
  - C. lymph nodes, spleen, thymus
  - D. bone marrow, spleen, liver
  - E. liver, spleen, pancreas
39. With regard to natural killer lymphocytes
- A. constitute less than 5% of blood lymphocytes
  - B. require opsonisation to enable their killing of cells
  - C. have a prime role in defense against parasites
  - D. require prior sensitisation to be effective
  - E. have an innate ability to lyse tumour cells and virally affected cells
40. With regard to B lymphocytes
- A. they constitute 50% of circulating lymphocytes
  - B. they are found in germinal centres in the red pulp of the spleen
  - C. they are genetically programmed to recognise specific antigens by means of antigen specific cell surface receptors
  - D. they release chemical mediators when attached to IgE Type I hypersensitivity reactions
  - E. they are not affected by HIV infection
41. Transplant rejection involves
- A. Type IV hypersensitivity only
  - B. Type IV and III hypersensitivity only
  - C. Type IV, III and II hypersensitivity only
  - D. Type IV and II hypersensitivity only
  - E. Type II and III hypersensitivity only
42. Major immune abnormalities associated with HIV infection include all of the following except
- A. hypergammaglobulinaemia
  - B. inversion of CD4-CD8 ratio
  - C. decreased delayed hypersensitivity reactions
  - D. decreased monocyte HLA class II expression
  - E. decreased IL2 and IFN $\gamma$  production

43. Successful immune response to HIV during the acute phase of infection results from
- A. increase in the CD4+ lymphocyte numbers
  - B. appearance of anti-HIV antibodies
  - C. Type III hypersensitivity reaction
  - D. lymphoid tissue based destruction of infected cells
  - E. development of CD8+ virus specific cytotoxic cells
44. With respect to macrophages, which of the following is not true
- A. they can produce TNF and IL4 both of which cause fever
  - B. they have direct tissue toxicity due to the ability to release hydrogen peroxide
  - C. they have oxygen dependent microbicidal activity
  - D. they have cytotoxicity against tumour cells
  - E. they process antigens and act as antigen presenting cells to activate lymphocytes
45. In viral hepatitis
- A. the majority of cases of acute Hepatitis B infection result in a carrier state, without clinical evidence of disease
  - B. anti HB s appears in the first week of infection
  - C. anti HCV IgG does not confer immunity to Hepatitis C
  - D. the major cause of death from Hepatitis B is hepatocellular carcinoma
  - E. Hepatitis A virus has an outer surface envelope of protein, lipid and carbohydrate
46. The most common cause of pericarditis is
- A. SLE
  - B. drug hypersensitivity
  - C. trauma
  - D. post myocardial infarction
  - E. bacterial
47. All of the following are neoplastic syndromes associated with lung cancer except
- A. Cushing's syndrome
  - B. syndrome of inappropriate ADH secretion
  - C. hypocalcaemia
  - D. carcinoid syndrome
  - E. hypertrophic osteoarthropathy
48. All of the following are features of rheumatic fever except
- A. carditis
  - B. subcutaneous nodules
  - C. erythema nodosum
  - D. elevated antistreptolysin
  - E. aschoff bodies in the heart
49. Mediators of septic shock include all of the following except
- A. IL6
  - B. C5a
  - C. PAF
  - D. catecholamines
  - E. TNF antibodies

50. Metaplasia is seen in all of the following except
- A. respiratory epithelium of cigarette smokers
  - B. vitamin A excess
  - C. Barrett's oesophagitis
  - D. epithelium of a pancreatic duct containing stones
  - E. foci of cell injury
51. The commonest site of a Berry aneurysm in the Circle of Willis is
- A. junction of anterior cerebral and anterior communicating arteries
  - B. junction of middle cerebral and internal carotid arteries
  - C. bifurcation of the basilar artery
  - D. the middle cerebral artery
  - E. junction of the posterior cerebral and posterior communicating arteries
52. The virus causing molluscum contagiosum belongs to the following viral family
- A. adeno
  - B. herpes
  - C. parvo
  - D. pox
  - E. picorna
53. Most pulmonary emboli
- A. cause centrally located pulmonary haemorrhage
  - B. cause pulmonary infarction
  - C. cause acute right heart failure
  - D. are clinically silent
  - E. lead to pulmonary hypertension
54. Acute pancreatitis
- A. may be caused by Helminth infection
  - B. causes hypercalcaemia
  - C. develops in 50% of patients with gallstones
  - D. leads to inhibition of elastase
  - E. involves acinar cell injury as a late event
55. Which of the following is not a para-neoplastic syndrome associated with lung carcinoma
- A. ectopic ADH secretion
  - B. dermatomyositis
  - C. migratory thrombophlebitis
  - D. Eaton-Lambert (myasthenic) syndrome
  - E. thrombocytosis
56. Which of the following tumour is benign
- A. chondrosarcoma
  - B. osteochondroma
  - C. chondroblastoma
  - D. Ewing's tumour
  - E. none of the above

57. Which of the following is not a feature of acute Crohn's disease
- A. segmental lesions
  - B. serosal involvement
  - C. fissures penetrating deep into the wall of affected mucosa
  - D. inflammatory pseudo-polyps
  - E. epithelioid granulomata
58. A 50-year old woman presents with back pain. X-rays suggest a malignant deposit in the 10th thoracic vertebra. The least likely primary site is
- A. breast
  - B. ovary
  - C. thyroid
  - D. kidney
  - E. colon
59. Regarding haemorrhagic infarction of the brain, which of the following is not true
- A. it usually results from an embolic event
  - B. it usually contains multiple petechial haemorrhages which may be confluent
  - C. the distinction between this and non haemorrhagic infarcts is clinically insignificant
  - D. the haemorrhages are presumed to be secondary to reperfusion injury
  - E. the size of it will depend in part upon the collateral blood supply to that area
60. The histological appearance of contraction bands in association with acute myocardial infarction indicate
- A. previous old myocardial infarctions
  - B. early aneurysmal formation
  - C. compensatory responses to decreased myocardial contractility
  - D. a right ventricular infarct
  - E. recent reperfusion therapy
61. After occlusion of a coronary artery
- A. the ischaemia is most pronounced in the epicardial region
  - B. loss of contractility only occurs when ultra structural changes in the myocyte are present
  - C. reperfusion of the ischaemic area can result in new cellular damage, due to the generation of oxygen free radicals
  - D. Q waves on the ECG are diagnostic of transmural infarction
  - E. none of the above are true
62. With regard to aortic dissection, which is incorrect
- A. it tends to occur in 40-60 year old men
  - B. approximately 90% of non-traumatic cases occur in patients with antecedent hypertension
  - C. it is usually associated with marked dilatation of the aorta
  - D. it is unusual in the presence of substantial atherosclerosis
  - E. it is usually caused by an intimal tear within 10cm of the aortic valve

63. The most common site of origin of emboli causing cerebrovascular disease is
- A. common carotid artery
  - B. internal carotid artery
  - C. the heart
  - D. either end of basilar artery
  - E. intracranial vessels
64. Which of the following is malignant
- A. Squamous cell papilloma
  - B. Hydatidiform mole
  - C. Chondroma
  - D. Mature teratoma
  - E. Bronchial carcinoid
65. Anaplasia is not characterised by
- A. pleomorphism
  - B. Abundant nuclear DNA
  - C. A nuclear-cytoplasmic ratio of 1:6
  - D. Coarsely clumped chromatin
  - E. Lack of differentiation
66. All of the following are precancerous except
- A. Chronic gastritis of pernicious anaemia
  - B. Solar keratosis
  - C. Crohn's disease
  - D. Leukoplakia
  - E. Chronic ulcerative colitis
67. Prothrombogenic factors include all of the following except
- A. Platelet activating factor
  - B. Von Willebrand factor
  - C. Nitric oxide
  - D. Tissue factor
  - E. tPA inhibitor
68. In acute inflammation, all of the following are true except
- A. there is contraction of endothelial cells
  - B. there is a mononuclear infiltrate
  - C. there is induction of adhesion molecules on endothelium
  - D. there is production of arachidonic acid metabolites
  - E. cytokines induce a systemic acute phase response
69. Cellular events in acute inflammation include all of the following except
- A. redistribution of preformed adhesion molecules to the cell surface of leukocytes
  - B. adhesion and transmigration of leukocytes to endothelium
  - C. leukocyte activation
  - D. margination of macrophages to vessel walls
  - E. extracellular release of lysosomal enzymes and products of arachidonic acid metabolism

70. The factor conferring the most risk in thromboembolic disease is
- A. smoking
  - B. atrial fibrillation
  - C. oral contraceptives
  - D. prolonged bed rest
  - E. late pregnancy / post delivery
71. Systemic lupus erythematosus
- A. has a female : male gender ratio of 2:1
  - B. is characterised by antinuclear antibodies (ANAs)
  - C. rarely involves the kidney
  - D. is associated with a seronegative arthropathy causing marked joint erosion
  - E. is commonly fulminant with death in weeks to months
72. The most common cause of Traveller's diarrhoea is
- A. Rotavirus
  - B. E.coli
  - C. Shigella
  - D. Salmonella
  - E. Giardia
73. Iron deficiency anaemia features
- A. a normal haematocrit
  - B. increased serum ferritin
  - C. normal mean red cell volume
  - D. low platelet count
  - E. none of the above
74. Platelets
- A. have a normal concentration range in peripheral blood of  $80-100 \times 10^3/\text{mm}^3$
  - B. are important in haemostasis only
  - C. remain viable in stored blood for 24 hours only
  - D. normally are removed from the circulation almost entirely by the spleen
  - E. have an average lifespan of average 20 days
75. In compensated heart failure
- A. right atrial pressure drops
  - B. maximum cardiac output is unchanged
  - C. resting cardiac output is unchanged
  - D. renin level eventually drops below premorbid level
  - E. fluid retention plays no role
76. Infective endocarditis
- A. in the acute form, is most commonly caused by streptococci
  - B. involves abnormal valves in most acute cases
  - C. is confirmed by positive blood cultures in less than 50% of cases
  - D. may cause splenic infarction
  - E. may cause MacCallum's plaques to form on affected valves

77. Cor Pulmonale may be caused by
- A. congenital heart disease
  - B. mitral stenosis
  - C. left ventricular failure
  - D. primary pulmonary hypertension
  - E. aortic regurgitation
78. Regarding peptic ulceration
- A. it occurs most commonly in the antrum of the stomach
  - B. it has a strong genetic influence
  - C. there is H. pylori infection of the mucosa in 50% of patients with duodenal ulceration
  - D. it is more frequent in patients with chronic obstructive pulmonary disease
  - E. gastric acid is the only prerequisite for formation of ulcers
79. The features of bronchogenic carcinoma include
- A. the classification of "oat cell" tumour within the large cell type
  - B. high initial response to chemotherapy for small cell type
  - C. the strongest correlation with cigarette smoking in the adenocarcinoma type
  - D. that 50% of small cell type occur in nonsmokers
  - E. histological features identical in small cell carcinomas and squamous cell types
80. The major abnormalities of immune function in AIDS are characterised by
- A. Inversion of the CD4-CD8 ratio
  - B. Increase in the number of memory T cells
  - C. Hypogammaglobulinaemia and decreased circulating immune complexes
  - D. Decreased secretion of TNF and IL-1
  - E. All of the above
81. Regarding hypersensitivity reactions
- A. In anaphylaxis, IgE is bound to mast cells by their Fab portions to release vasoactive amines
  - B. Goodpasture's syndrome is an example of type III hypersensitivity reaction
  - C. Farmer's lung is a type III reaction to micropolyspora species
  - D. Delayed hypersensitivity is mediated by macrophages
  - E. The Mantoux reaction is a form of contact hypersensitivity
82. Acute appendicitis
- A. In preschool children, it usually presents with the so-called "classic" signs and symptoms
  - B. It is associated with appendiceal obstruction in 10% of cases
  - C. Histologically, it shows neutrophilic infiltration of the muscularis layer
  - D. The clinical diagnosis is falsely positive in about 50% of cases
  - E. It cannot cause liver abscesses
83. Pneumocystis carinii
- A. Produces pneumocystis pneumonia in normal persons
  - B. Causes a Ghon's focus in the lung
  - C. Causes patchy atelectasis
  - D. Is a fungus
  - E. Attaches selectively to Type II alveolar cells

84. Regarding septic shock
- A. Endotoxin is the only cause
  - B. Marked vasoconstriction occurs in the non-infected tissue
  - C. Cardiac output is low in 75% of patients
  - D. Endotoxin entering the circulation causes an effect very similar to anaphylaxis
  - E. Blood viscosity is unchanged
85. Acute pancreatitis
- A. Is associated with increased serum amylase concentration without elevation in serum lipase concentration
  - B. Occurs most often in later life
  - C. Occurs in about 5% of patients with gallstones
  - D. When associated with alcohol is not usually preceded by chronic pancreatitis
  - E. Is often associated with hypercalcaemia
86. The acute nephritic syndrome has all of the following features except
- A. Proteinuria
  - B. Haematuria
  - C. Hypertension
  - D. Hyaline casts
  - E. Oliguria
87. A young baby presents with jaundice, dark urine and pale stools. He is most likely to have
- A. Physiologic jaundice of the newborn
  - B. Breast milk jaundice
  - C. Gilbert's syndrome
  - D. Biliary atresia
  - E. None of the above
88. With regard to the leukocyte extravasation of the acute inflammatory response, which of the following is incorrect
- A. ELAM-1 is a selectin found on endothelium
  - B. E and P-selectins bind to oligosaccharides found on neutrophils and monocytes
  - C. L-selectin is found on neutrophils, monocytes and lymphocytes
  - D. ICAM-1 belongs to the immunoglobulin family of molecules, and is found on leukocytes
  - E. VCAM-1 binds to integrins
89. IgE mediated Type I hypersensitivity reactions require the action of which lymphocyte class
- A. B only
  - B. CD8 T cells and B cells
  - C. T $\mu$ 2 T cells and B cells
  - D. T $\mu$ 1 T cells and B cells
  - E. Natural Killer cells and B cells

90. Thrombus formation is inhibited by

- A. Von Willebrands factor
- B. IL-1
- C. Alpha 2 macroglobulin
- D. TNF
- E. Endothelial cell injury

PATHOLOGY ANSWERS

1. B	16. A	31. C	46. D	61. C	76. D
2. B	17. C	32. A	47. C	62. C	77. D
3. C	18. C	33. B	48. C	63. C	78. D
4. C	19. C	34. D	49. E	64. E	79. B
5. D	20. E	35. D	50. B	65. C	80. A
6. A	21. D	36. E	51. A	66. C	81. C
7. C	22. C	37. B	52. D	67. C	82. C
8. D	23. E	38. C	53. D	68. B	83. D
9. E	24. A	39. E	54. A	69. D	84. D
10. E	25. C	40. C	55. E	70. D	85. C
11. C	26. C	41. C	56. B	71. B	86. D
12. A	27. B	42. A	57. D	72. B	87. D
13. D	28. D	43. E	58. D	73. E	88. D
14. D	29. E	44. A	59. C	74. C	89. C
15. A	30. E	45. C	60. E	75. C	90. C