

CMS – 2014 (Medical Science Paper I)

1. A patient with small cell lung carcinoma has symptomatic hyponatraemia (serum sodium 127 mmol/ L). The most likely etiology is:
 - (a) Fanconi Syndrome
 - (b) Cushing's Syndrome
 - (c) Metabolic Syndrome
 - (d) Syndrome of inappropriate ADH

2. Regarding Gilbert's syndrome, which one of the following statements is not correct?
 - (a) Jaundice becomes severe with time.
 - (b) Hyperbilirubinemia increases after fasting.
 - (c) Inheritance of disease is autosomal dominant.
 - (d) Liver histology is normal.

3. Which of the following is an uncommon cause of autonomic dysfunction?
 - (a) G B S (Guillain Barre Syndrome).
 - (b) Porphyria.
 - (c) Diabetic neuropathy.
 - (d) Neuropathy associated with Vitamin B₁₂ deficiency.

4. Peripheral Eosinophilia is not a characteristic feature of:
 - (a) Hypersensitivity pneumonitis.
 - (b) Allergic aspergillosis.
 - (c) Tropical eosinophilia.
 - (d) Loeffler's syndrome.

5. Salicylate intoxication in adults usually causes:
 1. Severe respiratory alkalosis.
 2. Mixed metabolic acidosis respiratory alkalosis.
 3. Hyperchloremic metabolic acidosis.

Select the correct answer using the code given below

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

6. With reference to psoriatic arthritis, which one of the following statements is **not** correct?
- In 70 – 80% patients psoriasis precedes arthritis.
 - Distribution of arthritis is mainly asymmetrical.
 - Involvement of PIP joints is more than DIP joints.
 - Cup like erosions are seen on X ray.
7. Consider the following statements regarding rheumatic heart disease:
- Rheumatic carditis is a pancarditis.
 - Carey–Coombs murmur is a delayed systolic murmur heard during the course of acute rheumatic fever.
 - Mitral regurgitation is the most common manifestation of acute rheumatic carditis.
- Which of the statements given above is/are correct?
- 1 only
 - 2 and 3
 - 1 and 2
 - 1 and 3
8. The extra cellular fluid deficit in a comatose patient of diabetic ketoacidosis is replenished by:
- 0.9 % NaCl
 - 3 % NaCl
 - 5 % Dextrose
 - Ringer's lactate
9. Which one of the following is **not** associated with a high reticulocyte count?
- Acute bleed
 - Haemolytic anaemia
 - Megaloblastic anaemia
 - Response to treatment in 'nutrition – deficiency' anaemia
10. What happens when normal erythrocytes (blood – group matched) are transfused into a patient with anaemia secondary to an intracorporeal defect?
- Donor cells are destroyed.
 - Donor cells have normal survival.
 - Depends on the severity of anaemia.
 - Depends on whether the donor cells are fresh or stored (older than a week).

11. Elevated serum alkaline phosphatase is seen in all **except**:
- (a) Osteoporosis
 - (b) Osteomalacia
 - (c) Paget's disease of bone
 - (d) Cholestatic jaundice
12. Which one of the following pairs is **not** correctly matched?
- (a) Uraemic acidosis - Haemodialysis
 - (b) Methanol intoxication - Ethanol
 - (c) Hyperosmolar coma - Intravenous fluids
 - (d) Starvation ketosis - Glucagon
13. In a young epileptic woman wishing to use oral contraceptive agents, which of the following drugs is **not** an ideal agent?
- (a) Carbamazepine
 - (b) Sodium valproate
 - (c) Topiramate
 - (d) Ethosuximide
14. Which of the following is **not** true about alcoholic cirrhosis?
- (a) On many occasions alcoholic hepatitis and alcoholic cirrhosis coexist.
 - (b) Concomitant HIV infection accelerates it.
 - (c) Starts with macronodular and later on changes to micronodular cirrhosis.
 - (d) 10 – 40 % remains clinically silent.
15. Cardiac arrest may be due to all of the following **except**:
- (a) Ventricular fibrillation
 - (b) Atrial fibrillation
 - (c) Acute myocardial infarction
 - (d) Pulmonary embolism

16. Which of the following is **not** useful in the management of status epilepticus?
- (a) Lorazepam
 - (b) Phenytoin
 - (c) Phenobarbitone
 - (d) Carbamazepine
17. The following are indications for renal replacement in ARF **except**:
- (a) Hyperkalemia
 - (b) Fluid overload
 - (c) Uraemic pericarditis
 - (d) Metabolic alkalosis
18. Biphasic defibrillation in case of ventricular fibrillation is first done with:
- (a) 200 Joules
 - (b) 250 Joules
 - (c) 300 Joules
 - (d) 360 Joules
19. Gastric erosions are likely to be associated with the following conditions **except**:
- (a) Pernicious anaemia
 - (b) Cor pulmonale
 - (c) Polycythemia rubra vera
 - (d) Hepatic cirrhosis
20. Wegener's granulomatosis is characterized by all of the following **except**:
- (a) Vasculitis of respiratory tract
 - (b) Granulomatous uveitis
 - (c) Granulomatous hepatitis
 - (d) Glomerulonephritis
21. An 11 year old boy has elevated prothrombin and activated partial prothrombin time .
What is the most likely defect?
- (a) Defect in extrinsic pathway
 - (b) Defect in intrinsic pathway
 - (c) Defect in common pathway
 - (d) Defect in platelet function

22. The radiological findings in chest X ray in sarcoidosis includes the following **except**:
- (a) Bilateral symmetrical lymphadenopathy on chest X ray is commonly seen.
 - (b) Upper lobe involvement is more than that of lower lobe.
 - (c) Egg shell calcification is seen on X ray.
 - (d) Pleural effusion is a common finding.

23. Acute rheumatic fever is caused by:
- (a) Coagulase negative staphylococcus
 - (b) Streptococcus pneumonia
 - (c) Group A streptococcus
 - (d) Group D streptococcus

24. Which of the following is **not** a complication of peptic ulcer?
- (a) Gastric outlet obstruction
 - (b) Perforation
 - (c) Indigestion
 - (d) Bleeding

25. Match List I with List II and select the correct answer using the code given below the lists:

List I (Rickettsial infection)

List II (Means of transmission to humans)

- | | |
|----------------------------------|--|
| A. Rocky mountain spotted fever. | 1. Tick bite. |
| B. Q fever. | 2. Mite bite. |
| C. Rickettsial pox. | 3. Infected louse passes feces into broken skin. |
| D. Epidemic typhus. | 4. Inhalation of dried infected material. |

Code:

- | | A | B | C | D |
|-----|-----|-----|-----|-----|
| (a) | A/1 | B/4 | C/2 | D/3 |
| (b) | A/2 | B/3 | C/4 | D/1 |
| (c) | A/4 | B/1 | C/2 | D/3 |
| (d) | A/3 | B/1 | C/2 | D/4 |

26. Match List I with List II and select the correct answer using the code given below the lists:

<i>List I (Clinical features)</i>		<i>List II (Diagnosis)</i>	
A.	Osler's node	1.	Patent ductus arteriosus with reversal of shunt.
B.	Differential cyanosis	2.	Aortic stenosis with aortic regurgitation.
C.	Bisferiens pulse	3.	Pulmonary hypertension
D.	Graham Steel murmur	4.	Subacute bacterial endocarditis

Code:

	A	B	C	D
(a)	A/4	B/1	C/2	D/3
(b)	A/4	B/1	C/3	D/2
(c)	A/1	B/4	C/2	D/3
(d)	A/1	B/4	C/3	D/2

27. Consider the following:

1. Normal anion gap
2. Hyperchloraemic acidosis
3. Inappropriately high urinary pH (>5.4)

Which of the above are the characteristic features of renal tubular acidosis (RTA)?

- (a) 1, 2 and 3
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1 and 3 only

28. Which of the following are typical features of Parkinsonism?

1. Failure to swing the arms while walking
2. Nystagmus
3. Cogwheel rigidity
4. Festinating gait

Select the correct answer using the code given below.

- (a) 2, 3 and 4
- (b) 1, 2 and 4
- (c) 1 and 3 only
- (d) 1, 3 and 4

29. Consider the following statements about acromegaly:

1. Fibroma molluscum and acanthosis nigricans are common findings.
2. Paradoxical growth hormone response to TRH administration is observed.
3. Acro-osteolysis is a common radiological finding.
4. Diabetes mellitus may be associated in nearly 25 % of acromegalics.

Which of these statements are correct?

- (a) 1, 2 and 3
- (b) 1, 3 and 4
- (c) 1, 2 and 4
- (d) 2, 3 and 4

30. Of all the types of lupus nephritis, the worst outcome is seen in:

- (a) Minimal mesangial
- (b) Diffuse nephritis
- (c) Focal segment nephritis
- (d) Membranous nephritis

31. Which of the following is **not** a cause of hypomagnesemia?

- (a) Beta blockers
- (b) Chronic Pancreatic insufficiency
- (c) Poorly controlled diabetes mellitus
- (d) Alcoholism

32. Among the following, which one is **not** a good dietary source of iron?

- (a) Liver
- (b) Jaggery
- (c) Fish
- (d) Milk

33. Match List I with List II and select the correct answer using the code given below:

List I (Poison)

- A. Benzodiazepine
- B. Copper sulphate
- C. Opiates
- D. Paracetamol

List II (Antidote)

- 1. D - penicillamine
- 2. Flumazenil
- 3. N-acetyl cysteine
- 4. Naloxone

Code:

- | | A | B | C | D |
|-----|-----|-----|-----|-----|
| (a) | A/2 | B/4 | C/1 | D/3 |
| (b) | A/2 | B/1 | C/4 | D/3 |
| (c) | A/3 | B/1 | C/4 | D/2 |
| (d) | A/3 | B/4 | C/1 | D/2 |

34. An elderly male presented with unilateral headache, fever and high ESR (110 mm). What is the most likely diagnosis?

- (a) Tubercular meningitis
- (b) Migraine
- (c) Giant cell arteritis
- (d) Space occupying lesions

35. Which of the following is **not** a defect in calcium channels?

- (a) Episodic ataxia – 2
- (b) Spinocerebellar ataxia – 6
- (c) Hyperkalemic periodic paralysis
- (d) Hypokalemic periodic paralysis

36. Which of the following is a loop diuretic?

- (a) Ethacrynic acid
- (b) Spironolactone
- (c) Indopamide.
- (d) Thiazide.

37. The classical features of Wernicke's encephalopathy are the following **except**:
- (a) Horizontal nystagmus
 - (b) Confusional state
 - (c) Ophthalmoplegia
 - (d) Extension plantar response
38. Which one of the following is **not** seen in hepatorenal syndrome?
- (a) Hypotension
 - (b) Acute renal failure
 - (c) Low urinary sodium
 - (d) Low serum potassium
39. Common sites of involvement of Takayasu's arteritis are the following **except**:
- (a) Subclavian artery
 - (b) Common carotid artery
 - (c) Abdominal aorta
 - (d) Pulmonary artery
40. In which of the following is clubbing a common occurrence?
1. Infective endocarditis
 2. Congestive cardiac failure
 3. Pulmonary thromboembolism
 4. Ebstein anomaly
- Select the correct answer using the code given below:
- (a) 1 only
 - (b) 1 and 2
 - (c) 2 and 3
 - (d) 1 and 4
41. What is the most common lobe involved in Herpes Simplex virus encephalitis?
- (a) Frontal lobe
 - (b) Temporal lobe
 - (c) Occipital lobe
 - (d) Parietal lobe

42. Consider the following statements about staphylococcal pneumonia:
1. Three-fourth of the patients are below the age of one year.
 2. Pneumatoceles are common.
 3. It is the commonest cause of empyema in a child below two years of age.
 4. The condition is easily amenable to treatment in the outdoors.

Which of the above statements are correct?

- (a) 1, 2 and 3
- (b) 1 and 2 only
- (c) 1 and 4
- (d) 2 and 3 only

43. In carcinoid syndrome, the most common valvular lesion is:

- (a) Mitral stenosis
- (b) Mitral regurgitation
- (c) Tricuspid regurgitation
- (d) Pulmonary stenosis

44. Na^+ is reabsorbed in which part/parts of kidney ?

1. Proximal convoluted tubule
2. Distal convoluted tubule
3. Thick ascending limb of loop of Henle
4. Collecting duct

Select the correct answer using the code given below:

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 4
- (d) 1, 2 and 3

45. A 40 year old female presented with dysphagia and inability to open the mouth fully. The most likely diagnosis is:

- (a) Systemic lupus erythematosus
- (b) Systemic sclerosis
- (c) Dermatomyositis
- (d) Rheumatoid arthritis

46. Which one of the following tests is best for measuring glomerular function?

- (a) Blood urea
- (b) Serum creatinine
- (c) Creatinine clearance rate
- (d) Ultrasound of kidney

47. Optic chiasmal lesion commonly produces:
- Homonymous hemianopia
 - Bitemporal hemianopia
 - Uni-ocular vision loss
 - Concentric field defect
48. Adult hemoglobin consists of the following chains:
- $2 \alpha + 2 \beta$
 - $2 \alpha + 2 \delta$
 - $2 \beta + 2 \gamma$
 - $2 \alpha + 2 \gamma$
49. Consider the following statements regarding rheumatoid arthritis:
- The synovial fluid looks cloudy.
 - Synovial fluid viscosity is reduced.
 - Synovial fluid complement levels are markedly decreased.
 - Lymphocytes predominate in the differential white blood cell count in the synovial fluid.
- Which of the statements given above are correct?
- 1, 2 and 3
 - 1, 3 and 4
 - 1, 2 and 4
 - 2, 3 and 4
50. What is the commonest organism for prosthetic valve endocarditis?
- Staphylococcus epidermidis*
 - Streptococcus viridians*
 - HAECK organism
 - Staphylococcus aureus*
51. Tuberculoid leprosy is likely to have:
- Leonine facies
 - Negative lepromin test
 - Thickened peripheral nerve
 - Abundant lepra bacilli in the skin lesion
52. The following are true regarding Henoch Schonlein purpura **except**:
- 2/ 3rd cases are preceded by viral upper respiratory tract infection.
 - Renal involvement is seen in around 40 % of cases.
 - Small vessels are commonly affected.
 - Purpura is seen all over the body especially the upper limbs.

53. Which one of the following statements is **not** correct regarding cluster headache?
- (a) Females are more commonly affected than males.
 - (b) Pain usually occurs in periodicity.
 - (c) Unilateral photophobia is essentially present.
 - (d) Autonomic features may be present.
54. Maturity onset diabetes of the young (MODY) is inherited as:
- (a) Autosomal dominant
 - (b) Autosomal recessive
 - (c) X linked dominant
 - (d) X linked recessive
55. Ghon's complex is **not** characterized by:
- (a) Hilar lymph nodes
 - (b) Pleural effusion
 - (c) Prominent draining lymphatics
 - (d) Subpleural focus
56. Match list I with list II and select the correct answer using the code given below the lists:

List I (Urine exam)

- A. Red cell casts.
- B. Microscopic haematuria.
- C. Proteinuria.
- D. Broad cell casts.

List II (Disease)

- 1. Nephrotic syndrome.
- 2. Chronic renal failure.
- 3. Polycystic kidney disease.
- 4. Glomerulonephritis.

Code:

- | | A | B | C | D |
|-----|-----|-----|-----|-----|
| (a) | A/4 | B/3 | C/1 | D/2 |
| (b) | A/3 | B/2 | C/1 | D/4 |
| (c) | A/2 | B/3 | C/4 | D/1 |
| (d) | A/4 | B/1 | C/2 | D/3 |

57. Which one of the following is **not** a feature of Gullain-Barre syndrome?
- (a) Albumino – cytological dissociation
 - (b) Transient bladder disturbances
 - (c) Areflexia
 - (d) Babinski plantar response

58. With reference to Marfan's syndrome, which one of the following is **not** correct?
- (a) Lens of the eye is dislocated downward
 - (b) Aorta regurgitation is present in many patients
 - (c) There is Fibrillin 1 gene mutation
 - (d) Ratio of upper segment to lower segment is less than 1
59. Tetany may be a feature of the following **except**:
- (a) Hyperventilation
 - (b) Hypokalaemic alkalosis
 - (c) Hypomagnesaemia
 - (d) Hyponatraemia
60. Regarding vitamin "K", which one of the following statements is correct?
- (a) It is a water soluble vitamin
 - (b) Its body stores can last more than 8 years
 - (c) Its routine prophylaxis in newborn children is recommended to prevent early haemorrhagic disease
 - (d) It is the treatment of choice in patients with acute severe haemoptysis
61. Consider the following clinical features:
1. Impaired judgement
 2. Impaired memory
 3. Alteration of personality
 4. Clouding of consciousness
- Which of the above are characteristics of dementia?
- (a) 1 and 2 only
 - (b) 1, 2 and 3 only
 - (c) 3 and 4 only
 - (d) 1, 2, 3 and 4.
62. Koebner's phenomenon is seen in:
- (a) Lupus vulgaris
 - (b) Lupus erythematosus
 - (c) Psoriasis
 - (d) Eczematous dermatitis
63. Which hepatitis marker can be used to diagnose Acute Hepatitis B?
- (a) HBc Ag
 - (b) Anti HBc
 - (c) HBs Ag
 - (d) HBe Ag

64. Which one of the following is **not** an example of metabolic acidosis with high anion gap?
- (a) Lactic acidosis
 - (b) Ketoacidosis
 - (c) Methanol poisoning
 - (d) Renal tubular acidosis
65. Which one of the following is **not** a vector - borne disease?
- (a) Japanese encephalitis
 - (b) Dengue fever
 - (c) Kala-azar
 - (d) Meningococcal meningitis
66. Regarding management of Myxoedema coma, which of the following is **not** true?
- (a) Treatment must begin after biochemical confirmation of the diagnosis
 - (b) Levothyroxine usually given by I/V route
 - (c) Rewarming of the patient
 - (d) Cautious use of intravenous fluids
67. Which one of the following is the major determinant of plasma osmolality?
- (a) Serum sodium
 - (b) Serum potassium
 - (c) Blood glucose
 - (d) Blood urea
68. Acute aortic regurgitation occurs in:
- (a) Infective endocarditis
 - (b) Ankylosing spondylitis
 - (c) Marfan's syndrome
 - (d) Rheumatoid arthritis
69. Vitamin B₁₂ deficiency can cause the following **except**:
- (a) Myopathy
 - (b) Myelopathy
 - (c) Optic atrophy
 - (d) Peripheral neuropathy
70. A patient with cirrhosis develops oliguria and worsening azotemia. Urinary sediment is normal. Urinary sodium concentration is 5 meq/ L. The most likely cause could be:
- (a) Acute cortical necrosis
 - (b) Acute tubular necrosis
 - (c) Acute glomerulonephritis
 - (d) Hepatorenal syndrome

71. A 6 week old infant presents with recurrent nonbilious vomiting with some dehydration. A mass is palpable in right upper quadrant of abdomen with visible peristalsis. The most likely diagnosis is :
- (a) Intussusception
 - (b) Congenital hypertrophic pyloric stenosis
 - (c) Small intestine obstruction
 - (d) Duodenal atresia
72. A 2 year old previously healthy child develops abrupt onset high grade fever, drooling of saliva and respiratory distress. He has a toxic look and becomes severely ill within few hours. What is the most likely clinical diagnosis?
- (a) Acute tonsilopharyngitis
 - (b) Tracheo-oesophageal fistula
 - (c) Acute Epiglottitis
 - (d) Laryngeal web
73. A 6 year old child presents with oliguria, haematuria, puffiness of face. He has a convulsion and blood pressure is found to be 200/100 mm of Hg. Laboratory tests reveal hemoglobin: 12g/dl, total leucocyte count: $7200/\text{mm}^3$, platelet count: $3.1 \text{ lakhs}/\text{mm}^3$, blood urea: 80 mg/dl and serum creatinine: 1.1 mg/dl. What is the most likely diagnosis?
- (a) Haemolytic uraemic syndrome
 - (b) Urinary tract infection
 - (c) Acute glomerulonephritis with hypertensive encephalopathy
 - (d) Obstructive uropathy
74. A two year old child with acute watery diarrhea and severe dehydration presents to the emergency. Which of the following is the most appropriate initial treatment?
- (a) Ringer lactate at 30ml/kg given intravenously in 30 minutes
 - (b) Oral rehydration solution through nasogastric tube
 - (c) Ringer lactate at 10ml/kg given intravenously in 2 hours
 - (d) Normal saline at 10ml/kg given intravenously in 2 hours
75. A diagnosis of steroid dependent nephrotic syndrome is made in a 5 year old male child and he is initiated on a drug. After 6 weeks of therapy, he develops nausea, vomiting, neutropenia and gross hematuria. Which of the following is the most likely drug used?
- (a) Cyclophosphamide
 - (b) Levamisole
 - (c) Cyclosporine
 - (d) Prednisolone

76. Consider the following statements regarding distal renal tubular acidosis:
1. Blood biochemistry reveals normal anion gap metabolic acidosis
 2. There is defective secretion of H^+ in the distal tubule.
 3. There may be associated muscle weakness and rickets.
 4. Children may present with polydipsia and polyuria.
- Which of the above statements are correct?
- (a) 1 only
 - (b) 2 and 3 only
 - (c) 2 and 4 only
 - (d) 1, 2, 3 and 4
77. A one year old male child presents with poor urinary stream and dribbling of urine since birth. A mass is palpable mass just above the symphysis pubis. The most likely diagnosis is:
- (a) Tumor of the urinary bladder
 - (b) Posterior urethral valve
 - (c) Ureterocele
 - (d) Neuroblastoma
78. A 4 years old child presents with rash on lower limbs, arthritis, and abdominal pain. Urine examination reveals microscopic hematuria. The most likely diagnosis is:
- (a) Thrombaesthesia
 - (b) Idiopathic thrombocytopenic purpura
 - (c) Systemic lupus erythematosus
 - (d) Henoch Schonlein purpura
79. The following milestones can be achieved by a 12 month old infant **except**:
- (a) Wave “bye bye”
 - (b) Speak ‘mama’, ‘baba’, ‘dada’
 - (c) Make a tower of 6 blocks
 - (d) Stand without support
80. Which one of the following is **not** a feature of severe combined immunodeficiency in children?
- (a) Enlarged thymus
 - (b) Decreased serum immunoglobulin levels
 - (c) Defective T cell function
 - (d) Recurrent pulmonary infections

81. Children with an autosomal recessive condition have partial albinism, susceptibility to infections and presence of giant peroxidase positive lysosomal granules in granulocytes. What is the most probable diagnosis?
- Chediak Higashi syndrome
 - Hermansky Pudlak syndrome
 - Piebaldism
 - Waardenburg's syndrome
82. A 50 hours old full term breast – fed newborn boy weighing 3100 g presents with jaundice. Physical examination is normal. The total serum bilirubin is 11.0 mg/ dL with a direct bilirubin of 0.4 mg/ dL. The correct treatment would be to:
- Continue breast feeds and review after 48 hours
 - Stop breast feeds and review after 24 hours
 - Continue breast feeds and start blue – light phototherapy
 - Arrange for a double volume exchange transfusion
83. Which one of the following pairs is **not** correctly matched?
- Vitamin B6 ----- Beriberi
 - Vitamin B3 ----- Pellagra
 - Vitamin B12 ----- Subacute combined degeneration of cord.
 - Vitamin B5 ----- Burning feet syndrome
84. Match List I with List II and select the correct answer using the code given below the lists:
- List I* (Congenital malformation syndrome) *List II* (Congenital heart defect)
- | | |
|--------------------------------|-------------------------------|
| A. Foetal alcohol syndrome | 1. Bicuspid aortic valve |
| B. Turner's syndrome | 2. Endocardial cushion defect |
| C. Down syndrome | 3. Pulmonary stenosis |
| D. Congenital rubella syndrome | 4. Ventricular septal defect |
- Code:**
- | | A | B | C | D |
|-----|-----|-----|-----|-----|
| (a) | A/3 | B/2 | C/1 | D/4 |
| (b) | A/3 | B/1 | C/2 | D/4 |
| (c) | A/4 | B/2 | C/1 | D/3 |
| (d) | A/4 | B/1 | C/2 | D/3 |
85. A 12 months old baby boy weighs 4.5 kg and measures 60 cm. He has marked loss of subcutaneous fat and has no edema. What form of protein energy malnutrition does the baby have?
- Grade III protein energy malnutrition
 - Grade IV protein energy malnutrition with K
 - Marasmic Kwashiorkar
 - Marasmus

86. Which of the following pairs is **not** correctly matched?
- (a) Turner's syndrome 45, X
 (b) Down syndrome 47, XY, +21
 (c) Klinefelter's syndrome 47, XXY
 (d) Marfan's syndrome 47, XYY
87. Which of the following is the most reliable test for screening hemophilia?
- (a) Prothrombin time
 (b) Clotting time
 (c) Partial thromboplastin time
 (d) Clot retraction
88. A child with poliomyelitis in acute phase can have all the following **except**:
- (a) Painful affected extremity
 (b) Sensory loss
 (c) Hypotonia
 (d) Depressed deep tendon reflexes
89. Which one of the following antibodies is most specific in children with systemic lupus erythematosus?
- (a) Anti neutrophil cytoplasmic antibody
 (b) Anti myeloperoxidase antibody
 (c) Anti double stranded DNA antibodies
 (d) Anti histone antibodies
90. Match List I with List II and select the correct answer using the code given below the lists:

List I (Vaccine)

List II (Type of vaccine)

- | | |
|-----------------------------------|----------------------------|
| A. Hepatitis B vaccine | 1. Live attenuated vaccine |
| B. Diphtheria vaccine | 2. Sub unit vaccine |
| C. Haemophilus influenzae vaccine | 3. Toxoid |
| D. Measles vaccine | 4. Polysaccharide vaccine |

Code:

- | | A | B | C | D |
|-----|-----|-----|-----|-----|
| (a) | A/1 | B/4 | C/2 | D/3 |
| (b) | A/2 | B/3 | C/4 | D/1 |
| (c) | A/4 | B/1 | C/2 | D/3 |
| (d) | A/3 | B/1 | C/2 | D/4 |

91. Which of the following are the gases whose presence in high concentration in the lower strata of atmosphere, is chiefly responsible for causing the Greenhouse effect?

1. Sulphur dioxide
2. Carbon dioxide
3. Chlorofluorocarbons
4. Nitrogen

Select the correct answer using the code given below:

- (a) 1 and 2
- (b) 2 and 3
- (c) 3 and 4
- (d) 2 and 4

92. Consider the following electric lamps:

1. C F L
2. Incandescent bulb
3. L E D lamp

Indiscriminate or improper disposal of which of the above causes/ cause mercury pollution in the environment?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

93. Consider the following substances:

1. Acesulfame potassium
2. Polyethylene glycol
3. Saccharin
4. Sucralose

Which of the above are used as sugar substitutes in foods?

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

94. Ozone is

- (a) an isotope of Oxygen
- (b) an isomer of Oxygen
- (c) an allotrope of Oxygen
- (d) a hydrate of Oxygen

95. Which of the following contributes/contribute to the burst of monsoon in India?
1. Intense heating of the north-west part of Indian sub-continent during summer
 2. Steep pressure gradient between the Indian Ocean and the Indian landmass

Select the correct answer using the code given below:

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
96. In India, which one of the following determines the principles that should govern the grants- in-aid to the States?
- (a) Inter-State Council
 - (b) Ministry of Finance
 - (c) Finance Commission
 - (d) Planning Commission
97. Which one of the following is a Human Right as well as a Fundamental Right under the Constitution of India?
- (a) Right to Information
 - (b) Right to Education
 - (c) Right to Work
 - (d) Right to Housing
98. Which one of the following is **not** used as a food preservative?
- (a) Benzoic acid
 - (b) Citric acid
 - (c) Ethylene dichloride
 - (d) Sodium chloride
99. Which one of the following is located in Bastar region?
- (a) Bandhavgarh National Park
 - (b) Kanha National Park
 - (c) Indravati National Park
 - (d) Seshachalam Biosphere Reserve

100. Water hyacinth is generally perceived as a notorious aquatic weed, but it can be a useful plant. Which of the following statements is/ are **correct** in this context?

1. This plant contains certain substances which can be extracted and used as medicines, herbicides and pesticides.
2. This plant can be used to remove many heavy metals like Cadmium, Lead and Mercury from water bodies.

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

101. Use of calcium carbide for the artificial ripening of fruits is banned but it is often reported to be illegally used. What is/are the likely health hazards of exposure to this chemical?

1. Permanent damage to the eyes
2. Pulmonary edema
3. Irritation of mouth, throat and nose

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

102. Which of the following statements is correct regarding Malachite that is used as food adulterant?

- (a) It is used for ripening of mangoes and custard apple.
- (b) It is used to make green vegetables shiny.
- (c) It is added to sugar to increase its volume and weight.
- (d) It is added to tea dust to improve its flavour.

103. Which of the following organs from a brain dead person can be used as donated organs?

1. Heart
2. Kidney
3. Liver

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

104. Which of the following can be a threat to Biodiversity?

1. Global climate change
2. Pests and Pathogens
3. Invasive species

Select the correct answer using the codes given below:

- (a) 1, 2 and 3
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1 only

105. Which of the following can be used in biomass power plants to produce electricity?

1. Cow dung
2. Rice husk
3. Stalks of wheat

Select the correct answer using the codes given below.

- (a) 1 only
- (b) 2 and 3 only.
- (c) 1, 2 and 3
- (d) None of these can be used in biomass power plants.

106. Why are phosphates added to soft drinks?

- (a) To give the drinks a tangy taste.
- (b) To add sparkle to the drinks.
- (c) To supplement the drinks with certain mineral nutrients.
- (d) To give dark brown or chocolate colour to the drinks.

107. With reference to electrical and electronic equipment or components, the e-waste (Management and Handling) Rules, 2011 apply to:

1. Consumers
2. Producers
3. Collection centres

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

108. Which of the following can be made by using biodegradable polymers?

- (a) Artificial lens of the eye
- (b) Artificial blood vessels
- (c) Artificial teeth
- (d) Artificial intestine

109.

The Eastern Ghats and Western Ghats meet at

- (a) Anaimalai hills
- (b) Cardamom hills
- (c) Nallamala hills
- (d) Nilgiri hills

110. Consider the following statements:

1. Panchayati Raj is a four tier system of governance.
2. There is a reservation of seats for women in Panchayati Raj elections.
3. Members of Gram Panchayat can convene Lok Adalat.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 3 only
- (d) 1, 2 and 3

111. If you wish to see Pandas and Gibbons in their natural habitat in India, which of the following regions do you have to travel to?

- (a) Western Himalayas
- (b) Eastern Himalayas
- (c) Western Ghats
- (d) Eastern Ghats

112. Consider the following provisions of the Constitution of India:

1. Directive Principles of State Policy
2. Rural and Urban Local Bodies
3. Centre–State Relations

Which of the above has/ have a bearing on education?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

113. In which of the following cancers is it shown initially that the disruptive micronuclei can trigger DNA damage on chromosomes and can be a potential biomarker for genetic instability

- (a) Non small cell lung cancer
- (b) Small cell lung cancer
- (c) Breast cancer
- (d) Colon cancer

114. Who is the President of the Council of Scientific and Industrial Research (CSIR)?

- (a) The President of India
- (b) The Vice President of India
- (c) The Prime Minister of India
- (d) Union Minister of Science and Technology

115. Which of the following animals are found in India in their natural habitat?

1. Flying fox
2. Puma
3. Snow Leopard

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

116. Which of the following is/are used as decoloring agent in the refinement of sugar?

1. Dimethylamine epichlorohydrin copolymer
2. Sodium stearoyl lactylate

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

117. Consider the following crops of India:

1. Groundnut
2. Sesamum
3. Pearl millet

Which of the above is/are predominantly rainfed crops?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

118. Araku valley is in:

- (a) Eastern Ghats
- (b) Western Ghats
- (c) North-east India
- (d) Central India

119. Which one among the following types of forests exhibits highest biodiversity?

- (a) Moist deciduous forest
- (b) Tropical rain forest
- (c) Scrub forest
- (d) Dry deciduous forest

120. Which one of the following best describes the phenomenon of El Nino?

- (a) The anomalous widespread warming of the sea surface of tropical east and central Pacific Ocean
- (b) The revolving tropical storms of the Caribbean and Gulf of Mexico.
- (c) The deflection of the ocean currents in the northern and southern hemisphere due to the rotation of Earth.
- (d) A violent rotating column of air extending from a thunderstorm to the ground.