

**Combined Medical Services Examination – 2016
Paper-I**

1. A 40-year old male is admitted with acute inferior wall myocardial infarction. Half an hour later his B.P. is 80/50 mm Hg and heart rate is 40/minute with sinus rhythm. The **most appropriate** step in the management of this patient would be:
- (a) Administration of normal saline 300 ml over 15 minutes
 - (b) Immediate insertion of temporary pacemaker
 - (c) Intravenous administration of atropine sulfate
 - (d) Intravenous administration of iso-prenaline 50µg/minute

2. The characteristic feature of tricuspid insufficiency in the jugular venous pulse is:
- (a) Prominent 'a' wave
 - (b) Exaggerated 'x' and 'y' descents
 - (c) Cannon waves
 - (d) Obliteration of the 'x' descent and prominent 'CV' wave

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

List I (Clinical Features) List II (Diagnosis)

- | | |
|--------------------------|--|
| 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 Steell murmur | 4. Subacute bacterial endocarditis |

Code:

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

4. Acute aortic regurgitation occurs in:
- (a) Infective endocarditis
 - (b) Ankylosing spondylitis
 - (c) Marfan's syndrome
 - (d) Rheumatoid arthritis
5. The following are early complications of acute myocardial infarction **except**:
- (a) Papillary muscle dysfunction
 - (b) Ventricular septal defect
 - (c) Ventricular free wall rupture
 - (d) Dressler's syndrome

6. For which one of the following serum proteins, the levels of protein do not decrease in nephrotic syndrome?
- (a) Albumin
 - (b) Transferrin
 - (c) Fibrinogen
 - (d) Ceruloplasmin
7. Following are the causes of high anion-gap acidosis *except*:
- (a) Renal tubular acidosis
 - (b) Acute renal failure
 - (c) Chronic renal failure
 - (d) Diabetic ketoacidosis
8. A patient of cirrhosis develops oliguria and worsening azotemia. Urinary sediment is normal. Urinary sodium concentration is 5 mEq/L. The most likely cause could be:
- (a) Interstitial nephritis
 - (b) Acute tubular necrosis
 - (c) Acute glomerulonephritis
 - (d) Hepato-renal syndrome
9. Which one of the following infections is related to subacute sclerosing panencephalitis (SSPE)?
- (a) HIV
 - (b) Measles virus
 - (c) Japanese B encephalitis virus
 - (d) JC virus
10. Consider the following:
- 1. Failure to swing the arms while walking
 - 2. Nystagmus
 - 3. Cogwheel rigidity
 - 4. Festinant gait
- Typical features of Parkinsonism include which of the above?
- (a) 2, 3 and 4
 - (b) 1, 2 and 4
 - (c) 1 and 3 only
 - (d) 1, 3 and 4

11. Consider the following sites of lesion:

1. Left optic tract
2. Left optic radiation
3. Optic chiasma
4. Left lateral geniculate body

Right homonymous hemianopia will result from lesions at which of the above?

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

12. Raised alkaline phosphatase is seen in the following **except**:

- (a) Hyperparathyroidism
- (b) Obstructive jaundice
- (c) Osteomalacia
- (d) Multiple myeloma

13. Consider the following statements about acromegaly:

1. Fibroma mollusum and acanthosis nigricans are common findings.
2. Growth hormone secretion is increased by TRH in 50 to 80% of acromegalics.
3. Acroosteolysis is a common radiological finding
4. Diabetes mellitus may be associated in nearly 25% of acromegalics

Which of the statements given above are correct?

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

14. Causes of hypomagnesemia include all of the following **except**:

- (a) Betablocker
- (b) Chronic pancreatic insufficiency
- (c) Poorly controlled diabetes mellitus
- (d) Alcoholism

15. Which of the following conditions are associated with secondary diabetes mellitus?

1. Thyrotoxicosis, pheochromocytoma and acromegaly
2. Haemochromatosis
3. Pancreatic carcinoma

Select the correct answer using the code given below:

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

16. Consider the following statements:
1. Boils/suppurative lesions around the nose must be promptly treated with antibiotics.
 2. Suppurative lesions around the nose lead to cavernous sinus thrombosis.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
17. Which one of the following is **not** the ECG change of hyperkalemia?
- (a) Tall T-wave
 - (b) Tall P-wave
 - (c) Prolonged PR interval
 - (d) QRS- widening
18. Which one of the following tests has the highest chance of detecting HIV infection in a blood donor during the window period?
- (a) Demonstration of antibody to HIV by ELISA
 - (b) CD4 count
 - (c) p24 antigen detection
 - (d) Western blot test
19. Which of the following features are characteristic of tuberculoid leprosy?
1. Type 2 lepra reaction
 2. A few lesions with well demarcated edges
 3. Early and marked nerve damage
 4. Tendency to heal spontaneously
- Select the correct answer using the code given below:
- (a) 1, 2 and 3
 - (b) 2, 3 and 4
 - (c) 1 and 4
 - (d) 2 and 3 only
20. Which one of the following immunological reactions occurs in Goodpasture's syndrome?
- (a) Type I Atopy
 - (b) Type II cytotoxicity
 - (c) Type III immune complex
 - (d) Type IV cell mediation

21. Consider the following statements about leptospirosis:
1. It is a ubiquitous enzootic disease.
 2. Its incubation period ranges from 2 to 20 days.
 3. The intensity of jaundice is directly related to prognosis.
 4. Urine may show microscopic haematuria.

Which of the statements given above are correct?

- (a) 1, 2 and 4
 - (b) 1, 2 and 3
 - (c) 1, 3 and 4
 - (d) 2, 3 and 4
22. SVC syndrome can occur in the following *except*:
- (a) Pneumomediastinum
 - (b) Goitre
 - (c) Bronchogenic carcinoma
 - (d) Lymphoma

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

List I (Physical Sign)

List II (Medical Condition)

- A. Koebner phenomenon
- B. Erythema nodosum
- C. Erythema multiforme
- D. Nikolsky's sign

1. Lepra reaction
2. Pemphigus vulgaris
3. Stevens-Johnson syndrome
4. Psoriasis

Code:

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

24. Which one of the following is the major site of absorption of Vitamin B₁₂ ?
- (a) Stomach
 - (b) Terminal ileum
 - (c) Duodenum
 - (d) Mid Jejunum

25. The following features regarding polymyositis are true **except**:
- (a) Progressive proximal muscle involvement
 - (b) 25% patients may present with dysphagia
 - (c) Ocular muscle involvement is common
 - (d) Elevated levels of serum creatine kinase
26. Match List I with List II and select the correct answer using the code given below the lists:
- | | |
|--|-----------------------------------|
| <i>List I (Inflammatory Joint Disease)</i> | <i>List II (Clinical Finding)</i> |
| A. Reiter's Syndrome | 1. Onycholysis |
| B. Rheumatoid arthritis | 2. Keratoderma blenorrhagica |
| C. Psoriatic arthritis | 3. Xerostomia |
| D. Sjogren's syndrome | 4. Baker's cysts |
- Code:
- | | | | | |
|-----|---|---|---|---|
| | A | B | C | D |
| (a) | 4 | 2 | 3 | 1 |
| (b) | 2 | 4 | 1 | 3 |
| (c) | 2 | 4 | 3 | 1 |
| (d) | 4 | 2 | 1 | 3 |
27. The following drugs are useful in generalized anxiety disorders **except**:
- (a) Risperidone
 - (b) Amitryptiline
 - (c) Buspirone
 - (d) Venlafaxine
28. Systemic inflammatory response syndrome (SIRS) can have the following features **except**:
- (a) Hypothermia
 - (b) Bradycardia
 - (c) Tachypnea
 - (d) Leucopenia (WBC < 4000)
29. Which of the following is **not** a complication of malaria?
- (a) ARDS
 - (b) Acidosis
 - (c) Hyperglycaemia
 - (d) Coma

30. Cardiac troponin may be elevated in:
- Muscular dystrophy
 - Chronic kidney failure
 - Acute liver failure
 - Epilepsy
31. Which of the following are the physiological abnormalities in chronic obstructive lung disease?
- Reduced total lung capacity(TLC)
 - Increased functional residual capacity
 - Increased residual volume(RV)
 - Increased RV/TLC ratio
- Select the correct answer using the code given below:
- 1 and 2 only
 - 2, 3 and 4
 - 1, 3 and 4
 - 3 and 4 only
32. Consider the following statements:
Acute respiratory distress syndrome characteristically occurs in
- Gram negative septicaemia
 - Gastric aspiration
 - Pancreatitis
 - Severe burns
 - Myocarditis
- Which of the statements given above are correct?
- 2, 3, 4 and 5
 - 1, 3, 4 and 5
 - 1, 2 and 5
 - 1, 2, 3 and 4
33. Botulism can have the following clinical features *except*:
- Hyperpyrexia
 - Sudden onset quadriplegia
 - Cranial nerve deficits
 - Respiratory failure
34. A 55-year old man, non smoker presents with sudden onset of shortness of breath. On examination, pulse rate is 110/minute and B.P. 180/110 mm Hg. Patient is restless and anxious. Examination of chest shows bilateral rhonchi and crepitation. S₃ gallop is heard on auscultation of precordium. There is no history of chronic bronchitis. The most likely diagnosis is:
- Bronchial asthma
 - Acute LVF
 - Pneumothorax
 - Acute exacerbation of COPD

35.

Consider the following statements:

Small cell carcinoma of lung is commonly associated with following paraneoplastic syndromes:

1. Ectopic ACTH production
2. Lambert- Eaton syndrome
3. Syndrome of inappropriate ADH (SIADH)
4. Addison's disease

Which of the statements given above are correct?

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

36. On abdominal percussion, liver dullness may be obliterated in the following **except:**

- (a) Fatty liver
- (b) Emphysema
- (c) Perforated viscus
- (d) Fulminant hepatitis

37.

Consider the following statements regarding *Helicobacter pylori*:

1. It is a gram negative bacterium
2. It invades the epithelium
3. It produces urease
4. It produces chronic gastritis

Which of the statements given above are correct?

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

38.

Consider the following conditions:

1. Steroid therapy
2. Hypertriglyceridaemia
3. Hypercalcaemia
4. Azathioprine therapy

Acute pancreatitis may occur in which of the above conditions?

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

39. A 60-year old patient presents with gradually increasing dysphagia to solids for 3 months with significant loss of weight. The most probable diagnosis is:
- (a) Stricture oesophagus
 - (b) Carcinoma oesophagus
 - (c) Reflux oesophagitis
 - (d) Neurogenic oesophagus

40.

Consider the following statements:

1. Gentamicin should be added to empirical regime for acute meningitis for patients aged more than 55 years.
2. Ampicillin covers listeria monocytogenes.

Which of the statements given above is/are correct?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
41. Which one of the following gases is used for sterilization of pharmaceutical products?
- (a) Ethylene oxide
 - (b) Ammonia
 - (c) Halothane
 - (d) Nitrous oxide
42. The following statements about peptic ulcer are true *except*:
- (a) Eradication of *H. pylori* is a part of medical management.
 - (b) Duodenal ulcer invariably changes into malignant.
 - (c) Complications are indication for surgery.
 - (d) Zollinger-Ellison syndrome is associated with intractable peptic ulceration.
43. In a patient with lacerated injury foot who is not actively immunised against tetanus, which one of the following is indicated for tetanus prophylaxis?
- (a) Penicillin
 - (b) Tetanus toxoid
 - (c) Tetanus immunoglobulin
 - (d) Triple vaccine
44. Which one of the following neoplasms can lead to 'water intoxication'?
- (a) Oat cell carcinoma of bronchus
 - (b) Hepatocarcinoma
 - (c) Testicular tumours
 - (d) Rhabdomyosarcoma

45. The Swan-Ganz catheter is used to measure:
- (a) Peripheral arterial blood pressure
 - (b) Portal venous pressure
 - (c) Pulmonary wedge pressure
 - (d) Intracranial pressure monitoring
46. Delirium is usually seen in
- (a) Acetaminophen toxicity
 - (b) Atropine toxicity
 - (c) Kerosene poisoning
 - (d) Digitalis toxicity
47. The following statements regarding Hodgkin's disease are true *except*:
- (a) It usually presents as painless lymphadenopathy.
 - (b) The Pel-Ebstein fever is a characteristic feature.
 - (c) Stage III disease is confined to one side of the diaphragm.
 - (d) Reed-Sternberg cells are a diagnostic feature.
48. Following are causes of bleeding *except*:
- (a) Heparin induced thrombocytopenia
 - (b) Dengue fever
 - (c) ITP
 - (d) Aspirin
49. The combination of cyanosis with clubbing can be seen in the following conditions *except*:
- (a) Eisenmenger syndrome
 - (b) Lung abscess
 - (c) Chronic bronchitis
 - (d) Pulmonary AV fistula
50. Diagnosis and grading of multi-organ failure is based on all the following criteria *except*:
- (a) Serum bilirubin
 - (b) Serum albumin
 - (c) Serum creatinine
 - (d) $\text{Pa O}_2 / \text{Fi O}_2$ ratio
51. A 16-year old boy presents with exertional dyspnea, haemoptysis and occasionally paroxysmal nocturnal dyspnea. There was history of joint pains five years back. The most probable diagnosis is:
- (a) Aortic regurgitation
 - (b) Mitral stenosis
 - (c) Tricuspid stenosis
 - (d) Aortic stenosis

52.

Consider the following statements:

The Adrenocortical insufficiency may result in

1. Hyponatremia
2. Hypokalemia
3. Acidosis
4. Hyperglycemia

Which of the statements given above is/are correct?

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

53.

Consider the following statements:

Life-threatening pneumococcal infection is a complication seen in

1. Idiopathic thrombocytpaenic purpura
2. Sickle cell disease
3. Thalassemia minor
4. Nephrotic syndrome

Which of the statements given above is/are correct?

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

54. The following are true regarding Zollinger- Ellison syndrome *except*:

- (a) Common age group is 30 to 50 years
- (b) Gastrin level is usually high
- (c) Diarrhea can be an associated feature
- (d) It occurs in association with MEN-2 syndrome

55. The following may be seen in a patient with chronic liver disease *except*:

- (a) Prolonged PT
- (b) Prolonged PTT
- (c) Thrombocytopenia
- (d) Decreased factor VIII

56. Pseudo membranous colitis is caused by which of the following organisms?

- (a) *Shigella*
- (b) *Clostridium difficile*
- (c) *E. coli*
- (d) *Clostridium perfringens*

57. A patient presents with breathlessness and occasional dry cough. On physical examination, he is found to have bilateral basal crepitations. His pulmonary function tests reveal a decrease in total lung capacity and vital capacity(VC), with normal FEV1/FVC ratio. He is most likely suffering from:

- (a) Chronic bronchitis
- (b) Idiopathic pulmonary fibrosis
- (c) Cystic fibrosis
- (d) Allergic bronchopulmonary aspergillosis

58. A 45 year old hypertensive male patient presented to the casualty with 3 hour history of sudden onset severe headache associated with nausea and vomiting. On clinical examination, patient had right sided ptosis and neck stiffness. Rest of the neurological examination was normal. The most likely diagnosis in this case is:

- (a) Hypertensive brain damage
- (b) Migraine
- (c) Aneurysmal subarachnoid bleed
- (d) Acute pyogenic meningitis

59. Which one of the following is **not** a treatment of hepatic encephalopathy?

- (a) Lactulose
- (b) Rifaximin
- (c) TIPS
- (d) Electrolyte supplementation

60. Features of intravascular haemolysis are the following **except**:

- (a) Increased LDH
- (b) Haemoglobinuria
- (c) Increased serum indirect bilirubin
- (d) Increased serum haptoglobin

61. Consider the following statements:

1. Hypertrophic cardiomyopathy can lead to sudden cardiac death.
2. Dressler's syndrome is an early complication of acute myocardial infarction.

Which of the statements given above is/are correct?

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

62. The common sites of hypertensive bleed are the following **except**:

- (a) Basal ganglion
- (b) Pons
- (c) Cerebellum
- (d) Frontal cortex

63. Hypoglycaemia as an adverse side effect is most commonly seen during the treatment with:
- (a) Dipeptyl peptidase-IV inhibitors
 - (b) Metformin
 - (c) α – glucosidase inhibitors
 - (d) Sulfonylureas
64. Which of the following statements is/are correct regarding Gilbert's syndrome?
1. Inheritance of the disease is autosomal dominant.
 2. Jaundice becomes very severe with time.
 3. Fasting leads to increased bilirubin levels.
- Select the correct answer using the code given below:
- (a) 1 and 3 only
 - (b) 1 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
65. The following are causes of secondary hypertension *except*:
- (a) Conn's syndrome
 - (b) Carcinoid syndrome
 - (c) Cushing's syndrome
 - (d) Pheochromocytoma
66. Tetralogy of Fallot (Fallot's tetralogy) is characterised by the following *except*:
- (a) Ventricular septal defect
 - (b) Overriding aorta
 - (c) Pulmonary hypertension
 - (d) Right ventricular hypertrophy
67. Regarding high altitude pulmonary oedema, the following statements are true *except*:
- (a) It can be caused by physical exertion at high altitude
 - (b) It does not occur in a physically fit person
 - (c) It occurs due to leak in the alveolar capillary membrane
 - (d) Portable hyperbaric chamber may be used for the treatment instead of descent to a lower altitude
68. Complications of myocardial infarction are all *except*:
- (a) Systemic embolisation
 - (b) Rupture of interventricular septum
 - (c) Dissection of aorta
 - (d) Ventricular fibrillation

69. Philadelphia chromosome can be detected by which of the following techniques?

1. FISH
2. PCR
3. Cytogenetics

Select the correct answer using the code given below:

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

70. The following statements regarding celiac disease are correct *except*:

- (a) Absence of gastrointestinal symptoms rules out celiac disease
- (b) Malabsorption syndrome may be a presenting feature
- (c) Duodenal biopsy shows increased intraepithelial lymphocytes
- (d) Steroid therapy may induce remission

71. A 6 year old child presents with oliguria, haematuria, puffiness of face, convulsions, B.P. of 200/100 mm Hg and blood urea 80 mg%. What is the most likely diagnosis?

- (a) Haemolytic uraemic syndrome
- (b) Nephrotic syndrome
- (c) Acute glomerulonephritis with hypertensive encephalopathy
- (d) Obstructive uropathy

72. A 3 year old child is brought for sudden inability to walk following fever of two days duration. On clinical examination, sensorium is normal, both the lower limbs are hypotonic with the right limb more affected than the left. Plantar reflex is equivocal and deep tendon reflexes are not elicitable in the lower limbs on both sides. The most probable diagnosis is

- (a) Acute poliomyelitis
- (b) Acute rheumatic fever
- (c) Acute transverse myelitis
- (d) Acute infective polyneuritis

73. X-ray of the skull in an infant shows periventricular calcification in

- (a) Tuberculous meningitis
- (b) Cytomegalovirus infection
- (c) Japanese B encephalitis
- (d) Congenital syphilis

74. A 4 year old boy diagnosed as a case of sickle cell disease presents with pain and swelling of bones, marked in small bones of hand and feet along with severe pain in abdomen. Investigation reveals necrosis of femoral head and upper third of tibia. The symptoms have resolved after one week. The possible explanation is:

- (a) Aplastic crisis
- (b) Sequestration crisis
- (c) Vaso-occlusive crisis
- (d) Hemolytic crisis

75.

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

List I (Genetic disorder)

List II (Genotype)

- | | | |
|-------------------------|----|--------------|
| A. Down Syndrome | 1. | 47, XY, +21 |
| B. Turner Syndrome | 2. | 46, XY |
| C. Noonan Syndrome | 3. | 46, XX, 5p - |
| D. Cri-du-chat Syndrome | 4. | 45, XO |
| | 5. | 47, XXY |

Code:

- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 1 | 4 | 2 | 3 |
| (b) | 1 | 4 | 5 | 3 |
| (c) | 3 | 1 | 2 | 4 |
| (d) | 3 | 1 | 5 | 4 |

76. With reference to Paediatrics, the following are true of breath holding spells **except**:

- (a) They occur during inspiration
- (b) They are involuntary
- (c) Cyanosis may not occur
- (d) Bradycardia may occur

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

List I (Drugs for epilepsy)

List II (Side effects dose-dependent)

- | | | |
|---------------------|----|----------------------|
| A. Sodium valproate | 1. | Raised liver enzymes |
| B. Carbamazepine | 2. | Hirsutism |
| C. Phenytoin | 3. | Hyperactivity |
| D. Phenobarbitone | 4. | Drowsiness |

Code:

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

78. The confirmatory diagnostic test for thalassemia carrier status is:
(a) Low haemoglobin level
(b) Haemoglobin A2 more than 3.5%
(c) Foetal haemoglobin more than 10%
(d) Positive osmotic fragility test
79. A three year old male child has a poor stream of urine and strains at micturition. After voiding, the bladder is still palpable. The patient should be advised
(a) Abdomen X-ray
(b) Urine examination
(c) Circumcision
(d) Excretory urogram
80. A two year old child has weight less than 3 SD (less than 3 Z score) as per WHO growth chart and mid upper arm circumference less than 11 cm. What is the correct diagnosis for this child?
(a) Acute malnutrition
(b) Chronic malnutrition
(c) Severe acute malnutrition
(d) Moderate acute malnutrition
81. For a three year old male child, the height for age is 82% of the expected for that age and weight for height is 65% of the expected value. The child is labelled as:
(a) Normal
(b) Wasted
(c) Stunted
(d) Wasted and stunted
82. For an early infant diagnosis of HIV infection, which of the following tests is used as per national programme?
(a) ELISA (IgG antibody test)
(b) DNA PCR test
(c) p24 antigen test
(d) CD4 count
83. A normal three year old baby should be able to do the following tasks *except*:
(a) Using hands and feet simultaneously
(b) Riding tricycle
(c) Copying a square
(d) Using pair of scissors

84. A seven year old child presents with intermittent claudication, pain and weakness of legs and dyspnea on running. Examination shows delayed and weak femorals compared to brachial arteries. The heart size is normal with a left ventricular forcible apex. The most probable diagnosis is:
- (a) Ventricular septal defect
 - (b) Patent ductus arteriosus
 - (c) Atrial septal defect
 - (d) Coarctation of aorta
85. A seven day old baby presents with complaints of vomiting and diarrhoea. Examination reveals cataract in both the eyes and jaundice. What is the most probable diagnosis?
- (a) Rh incompatibility
 - (b) Galactosemia
 - (c) Congenital rubella syndrome
 - (d) Congenital syphilis
86. The treatment of choice for Guillain-Barre syndrome is:
- (a) Corticosteroids
 - (b) Intravenous immunoglobulins
 - (c) Cyclosporins
 - (d) ACTH
87. A two year old child is admitted with history of fever for two weeks and convulsions for the last one day. CSF examination shows CSF pressure elevated to 30-40 cm H₂O, clear CSF, lymphocytic pleocytosis (250 cells/mm³), elevated protein and low chloride levels. What is the most probable diagnosis?
- (a) Pyogenic meningitis
 - (b) Tubercular meningitis
 - (c) Acute encephalitis
 - (d) Subacute sclerosing panencephalitis(SSPE)
88. Features of Turner syndrome in childhood include the following **except**:
- (a) Webbed neck
 - (b) Cubitus valgus
 - (c) Shield chest with widely spaced nipples
 - (d) Polydactyly
89. The following drugs can be used as steroid sparing agents in the treatment of nephrotic syndrome in children **except**:
- (a) Levamisole
 - (b) Aspirin
 - (c) Cyclophosphamide
 - (d) Mycophenolate mofetil

90. In childhood acute lymphoblastic leukemia, the following are good prognostic factors **except**:
- (a) Age between 1 and 9 years
 - (b) Female sex
 - (c) Leukocyte count less than 50,000/mm³
 - (d) Hypodiploidy
91. Consider the following statements:
- 1. Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes.
 - 2. Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.

Which of the statements given above is/are correct?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
92. There is a growing concern about the melting of Arctic permafrost. Why?
- (a) It will result in the increase of methane concentration in atmosphere.
 - (b) All the countries surrounding North Pole will be permanently submerged.
 - (c) The temperature of ocean currents will be drastically altered.
 - (d) The pH of the ocean water will be drastically changed.
93. With reference to Pre-Conception and Pre-Natal Diagnostics Techniques (Prohibition of sex selection) Act, 1994, which of the following statements is/are correct?
- 1. Every offence under this Act is cognizable non-bailable.
 - 2. For the first offence, the penalty for the doctor is 'upto 7 years of imprisonment with a fine up to Rs. 1,00,000.'

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
94. 'Nagoya Protocol', sometimes seen in news refers to:
- (a) Convention on International Trade in Endangered Species of Wild Fauna and Flora
 - (b) Convention on the Conservation of Migratory Species of Wild Animals
 - (c) Convention on Biological Diversity
 - (d) Convention on Wetlands of International Importance especially as Waterfowl Habitat

95. Some substances known as 'Short-Lived Climate Forcers' (SLCF) assume importance in the context of climate change. Which of the following is/are SLCF?

1. Black carbon
2. Carbon dioxide
3. Hydrofluorocarbons
4. Methane

Select the correct answer using the code given below:

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

96. Consider the following statements:

1. Production of cement blended with fly ash or slag (blended cement) is less energy efficient compared to the production of ordinary portland cement.
2. 'Electricity and heat production' together constitute the single largest contributor of greenhouse gases in India.

Which of the statements given above is/are correct?

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

97. What is the present share of agriculture and allied sectors in the Gross Domestic Product of India?

- (a) Less than 20%
- (b) Between 20% and 30%
- (c) Between 31% and 35%
- (d) Above 35%

98. The global warming potential is highest among which of the following greenhouse gases?

- (a) CO₂
- (b) CH₄
- (c) N₂O
- (d) SF₆

99. Which of the following is/are included in Kyoto Protocol?

1. Brominated flame retardants
2. Methyl alcohol
3. Hydrofluorocarbons

Select the correct answer using the code given below:

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

100. In the context of food processing, the addition of sulfites (sulphites) to fruits and vegetables has which of the following effects?

1. Prevention of browning
2. Increase in sour taste
3. Destruction of thiamine
4. Preservation of thiamine

Select the correct answer using the code given below:

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

101. Which of the following has/have antioxidant properties?

1. Ascorbic acid
2. Butylated hydroxyanisole
3. Stannous chloride
4. Tocopherol

Select the correct answer using the code given below:

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

102. In food processing, which of the following is/are used as emulsifiers?

1. Carboxymethyl cellulose
2. Ethylene diamine tetra acetate
3. Propylene glycol

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

103. To test the adulteration of milk, 3 ml of milk is boiled, then cooled to room temperature; and two or three drops of iodine solution is added. The milk turned blue. This indicates that the milk is adulterated with:

- (a) Sodium bicarbonate
- (b) Glucose
- (c) Starch
- (d) Urea

104. With reference to food preservation, which of the following statements is/are correct?

1. Pasteurization means the heating of a food product to a sufficiently high temperature to kill all the microorganisms present in it.
2. In the case of food preservation by sterilization by heat, foods high in acid are very easily sterilized as compared to those low in acid.

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

105. Consider the following statements:

1. Pasteurization by heat is used in the processing of fruit juices.
2. Water glass is used in the preservation of eggs.

Which of the statements given above is/are correct?

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

106. With reference to irradiation for food processing, which of the following statements is/are correct?

1. Cobalt-60 produces ionizing radiation, therefore it is used in the process of irradiation of food.
2. Ultra-violet rays are the only ionizing radiation used for irradiation of food.

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

107. Among the following pairs of States, in India, major deposits of bauxite are concentrated in:

- (a) Jharkhand and Odisha
- (b) Assam and West Bengal
- (c) Bihar and Haryana
- (d) Punjab and Rajasthan

108. Doha Development Agenda, sometimes seen in news, refers to the affairs of:

- (a) UNFCCC
- (b) UNCTAD
- (c) UNDP
- (d) WTO

109. With reference to 'monosodium glutamate'(MSG) used in processed foods, which of the following statements is/are correct?

1. MSG is not a naturally occurring substance.
2. MSG is a neurotransmitter.

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

110. In the parliamentary form of government, the

- (a) executive is responsible to the legislature
- (b) legislature is responsible to the executive
- (c) judiciary is responsible to the executive
- (d) legislature is responsible to the judiciary

111. The term 'Ramsar Convention', sometimes seen in news, refers to:

- (a) conservation of forests
- (b) conservation of wetlands
- (c) reduction of greenhouse gas emissions
- (d) controlling wildlife trafficking

112. In India, who heads the National Disaster Management Authority?

- (a) Prime Minister
- (b) Union Minister for Home Affairs
- (c) Cabinet Secretary
- (d) Secretary, Union Ministry of Environment, Forests and Climate Change

113. Natural gas is used for the production of which of the following?

- 1. Detergents and soaps
- 2. Electricity
- 3. Fertilizers for crops

Select the correct answer using the code given below:

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

114. Which of the following parts of the human body can be used as a sample/samples for the presence of mercury?

- 1. Blood
- 2. Hair
- 3. Nail

Select the correct answer using the code given below:

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

115. Which of the following is/are known as 'ozone depleting substance(s)'?

- 1. Black carbon
- 2. Halons
- 3. Oxides of nitrogen

Select the correct answer using the code given below:

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

116. Consider the following statements:

1. All organochlorine pesticides (OCPs) enter the human bodies through food chain only.
2. Some of the OCPs are categorized as Persistent Organic Pollutants.

Which of the statements given above is/are correct?

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

117. With reference to mercury pollution, which of the following statements are correct?

1. Once released into environment, mercury can turn into methyl mercury.
2. Mercury can enter the human body through inhalation.
3. As regards the entry and accumulation of mercury in humans, contaminated fish is an important source.

Select the correct answer using the code given below:

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

118. Consider the following statements:

1. In India, the executive power of a State is vested in its Chief Minister.
2. Union Territories are administered by the President of India through an Administrator appointed by him.

Which of the statements given above is/are correct?

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

119. The quantity of water required to produce 1 kg of which of the following foods is largest?

- (a) Barley
- (b) Mutton
- (c) Potato
- (d) Wheat

120. What is 'CRISPR-Cas9' sometimes seen in the news?

- (a) A targetted genome editing technique
- (b) A cancer causing gene
- (c) A robotic surgical procedure
- (d) A technique of two-dimensional electrophoresis