

794413

प्रश्न-पुस्तिका संख्या व बारकोड /
Question Booklet No. & Barcode

MPA-25

इस प्रश्न-पुस्तिका को तब तक न खोलें जब तक
कहा न जाए। Do not open this Question
Booklet until you are asked to do so.

पुस्तिका में पृष्ठों की संख्या : 24
Number of Pages in Booklet : 24
पुस्तिका में प्रश्नों की संख्या : 150
No. of Questions in Booklet : 150

Paper Code : 79

Sub : Anesthesiology / Anesthesia

समय : 02:30 घण्टे + 10 मिनट अतिरिक्त*

Exam Date - 04/07/2025

अधिकतम अंक : 150

Time : 02:30 Hours + 10 Minutes Extra*

Maximum Marks : 150



प्रश्न-पुस्तिका के पेपर की सील/पॉलिथीन बैग को खोलने पर प्रश्न-पत्र हल करने से पूर्व परीक्षार्थी यह सुनिश्चित कर लें कि :

- प्रश्न-पुस्तिका संख्या तथा ओ.एम.आर. उत्तर-पत्रक पर अंकित बारकोड संख्या समान हैं।
- प्रश्न-पुस्तिका एवं ओ.एम.आर. उत्तर-पत्रक के सभी पृष्ठ व सभी प्रश्न सही मुद्रित हैं। समस्त प्रश्न, जैसा कि ऊपर वर्णित है, उपलब्ध हैं तथा कोई भी पृष्ठ कम नहीं है / मुद्रण त्रुटि नहीं है। किसी भी प्रकार की विसंगति या दोषपूर्ण होने पर परीक्षार्थी वीक्षक से दूसरा प्रश्न-पत्र प्राप्त कर लें। यह सुनिश्चित करने की जिम्मेदारी अभ्यर्थी की होगी। परीक्षा प्रारम्भ होने के 5 मिनट पश्चात् ऐसे किसी दावे/अपत्ति पर कोई विचार नहीं किया जायेगा।

On opening the paper seal/polythene bag of the Question Booklet before attempting the question paper, the candidate should ensure that :

- Question Booklet Number and Barcode Number of OMR Answer Sheet are same.
- All pages & Questions of Question Booklet and OMR Answer Sheet are properly printed. All questions as mentioned above are available and no page is missing/misprinted.

If there is any discrepancy/defect, candidate must obtain another Question Booklet from Invigilator. Candidate himself shall be responsible for ensuring this. No claim/objection in this regard will be entertained after five minutes of start of examination.

परीक्षार्थियों के लिए निर्देश

1. प्रत्येक प्रश्न के लिये एक विकल्प भरना अनिवार्य है।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का मात्र एक ही उत्तर दीजिए। एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
4. OMR उत्तर-पत्रक इस प्रश्न-पुस्तिका के अन्दर रखा है। जब आपको प्रश्न-पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्रक निकाल कर ध्यान से केवल नीले बॉल पॉइंट पेन से विवरण भरें।
5. कृपया अपना रोल नम्बर ओ.एम.आर. उत्तर-पत्रक पर सावधानीपूर्वक सही भरें। गलत रोल नम्बर भरने पर परीक्षार्थी स्वयं उत्तरदायी होगा।
6. ओ.एम.आर. उत्तर-पत्रक में करेक्शन पेन/व्हाइटनर/सफेदा का उपयोग निषिद्ध है।
7. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है।
8. प्रत्येक प्रश्न के पाँच विकल्प दिये गये हैं, जिनमें क्रमशः 1, 2, 3, 4, 5 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले (बबल) को उत्तर-पत्रक पर नीले बॉल पॉइंट पेन से गहरा करना है।
9. यदि आप प्रश्न का उत्तर नहीं देना चाहते हैं तो उत्तर-पत्रक में पाँचवें (5) विकल्प को गहरा करें। यदि पाँच में से कोई भी गोला गहरा नहीं किया जाता है, तो ऐसे प्रश्न के लिये प्रश्न अंक का 1/3 भाग काटा जायेगा।
- 10.* प्रश्न-पत्र हल करने के उपरांत अभ्यर्थी अनिवार्य रूप से ओ.एम.आर. उत्तर-पत्रक जाँच लें कि समस्त प्रश्नों के लिये एक विकल्प (गोला) भर दिया गया है। इसके लिये ही निर्धारित समय से 10 मिनट का अतिरिक्त समय दिया गया है।
11. यदि अभ्यर्थी 10% से अधिक प्रश्नों में पाँच विकल्पों में से कोई भी विकल्प अंकित नहीं करता है तो उसको अयोग्य माना जायेगा।
12. मोबाइल फोन अथवा अन्य किसी इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए राजस्थान सार्वजनिक परीक्षा (भर्ती में अनुचित साधनों की रोकथाम अध्यापय) अधिनियम, 2022 तथा अन्य प्रभावी कानून एवं आयोग के नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

उत्तर-पत्रक में दो प्रतियाँ हैं - मूल प्रति और कार्बन प्रति। परीक्षा समाप्ति पर परीक्षा कक्ष छोड़ने से पूर्व परीक्षार्थी उत्तर-पत्रक की दोनों प्रतियाँ वीक्षक को सौंपेंगे, परीक्षार्थी स्वयं कार्बन प्रति अलग नहीं करें। वीक्षक उत्तर-पत्रक की मूल प्रति को अपने पास जमा कर, कार्बन प्रति को मूल प्रति से कट लाइन से मोड़ कर सावधानीपूर्वक अलग कर परीक्षार्थी को सौंपेंगे, जिसे परीक्षार्थी अपने साथ ले जावेंगे। परीक्षार्थी को उत्तर-पत्रक की कार्बन प्रति चयन प्रक्रिया पूर्ण होने तक सुरक्षित रखनी होगी एवं आयोग द्वारा मंगी जाने पर प्रस्तुत करनी होगी।

INSTRUCTIONS FOR CANDIDATES

1. It is mandatory to fill one option for each question.
2. All questions carry equal marks.
3. Only one answer is to be given for each question. If more than one answers are marked, it would be treated as wrong answer.
4. The OMR Answer Sheet is inside this Question Booklet. When you are directed to open the Question Booklet, take out the Answer Sheet and fill in the particulars carefully with Blue Ball Point Pen only.
5. Please correctly fill your Roll Number in OMR Answer Sheet. Candidates will themselves be responsible for filling wrong Roll No.
6. Use of Correction Pen/Whitener in the OMR Answer Sheet is strictly forbidden.
7. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question.
8. Each question has five options marked as 1, 2, 3, 4, 5. You have to darken only one circle (bubble) indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
9. If you are not attempting a question then you have to darken the circle '5'. If none of the five circles is darkened, one third (1/3) part of the marks of question shall be deducted.
- 10.* After solving question paper, candidate must ascertain that he/she has darkened one of the circles (bubbles) for each of the questions. Extra time of 10 minutes beyond scheduled time, is provided for this.
11. A candidate who has not darkened any of the five circles in more than 10% questions shall be disqualified.
12. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt with as per rules.

Warning : If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would be liable to be prosecuted under Rajasthan Public Examination (Measures for Prevention of Unfair means in Recruitment) Act, 2022 & any other laws applicable and Commission's Rules-Regulations. Commission may also debar him/her permanently from all future examinations.

1. Regarding tracheoesophageal fistula all are true except :
 - (1) An upper oesophagus that ends in a blind pouch and a lower oesophagus that connects to the trachea is least common variety.
 - (2) Feeding leads to choking and coughing while breathing result in gastric distension.
 - (3) The diagnosis suspected by failure to pass a catheter in to the stomach and confirmed by visualization of the catheter coiled in a blind upper oesophageal pouch.
 - (4) Positive pressure ventilation prior to intubation avoided.
 - (5) Question not attempted
2. While on cardiopulmonary bypass during elective coronary artery revascularization, the patient is noted to have bulging sclerae. Mean arterial pressure is 50 mm Hg, temperature is 28 °C and there is no ECG activity. The most appropriate action to take at this time is to
 - (1) Administer mannitol, 50 gm IV
 - (2) Administer furosemide, 20 mg IV
 - (3) Check the position of the aortic cannula
 - (4) Check the position of the venous return cannula
 - (5) Question not attempted
3. Ideal position for pulmonary artery catheter placement
 - (1) West Zone I
 - (2) West Zone II
 - (3) West Zone III
 - (4) West Zone IV
 - (5) Question not attempted
4. Which of the following statement is not true for anaesthetic management of a patient of Tetralogy of Fallot ?
 - (1) There is right to left shunting of blood.
 - (2) Shunting is minimized by pharmacologically increasing systemic vascular resistance.
 - (3) Increase in the inotropic state of the heart, increases the dynamic obstruction at the right ventricular infundibulum and worsen the shunting.
 - (4) β -Blockers should not be used to decrease inotropy.
 - (5) Question not attempted
5. Calculate the systemic vascular resistance (in dynes/sec/cm⁻⁵) from the following data : cardiac output 5.0 L/min, central venous pressure 8 mm Hg, mean arterial blood pressure 86 mm Hg, mean pulmonary arterial blood pressure 20 mm Hg, pulmonary capillary wedge pressure 9 mm Hg, heart rate 85 beats/min, patient weight 100 kg.
 - (1) 750
 - (2) 1000
 - (3) 1250
 - (4) 1500
 - (5) Question not attempted
6. Regarding Pathophysiology and management of the carotid endarterectomy which is Not True ?
 - (1) The origin of the common carotid artery is the most common site of atherosclerosis leading to TIA or stroke.
 - (2) ECG monitoring should include the V5 lead to detect ischemia
 - (3) During surgery and anaesthesia mean arterial pressure should be maintained at or slightly above the patients range.
 - (4) Carotid surgery can be performed under superficial and deep cervical plexus blocks. They effectively block the C2-C4 nerves and allow the patient to remain comfortably awake during surgery.
 - (5) Question not attempted
7. Factors that correlate with an increased risk of desaturation during One-Lung Ventilation are
 - A. High percentage of perfusion to the operative lung on preoperative V/Q scan.
 - B. Right-sided thoracotomy.
 - C. Low percentage of ventilation to the operative lung on preoperative V/Q scan.
 - D. Supine position during one-lung ventilation.

Select the correct answer using the codes below :

 - (1) A, C, D
 - (2) A, B, D
 - (3) C, D
 - (4) A, B
 - (5) Question not attempted

8. First-line imaging technique for patients presenting with a suspicion of acute ICH is

- (1) Non-contrast CT
- (2) Contrast CT
- (3) MRI
- (4) MR Angiography
- (5) Question not attempted

9. In a Traumatic Brain Injury (TBI) patient, which of the following statements are true?

- A. Anaesthetic agents that are known to be cerebral vasoconstrictors are preferred.
- B. After TBI, for initial 24 hrs, cerebral blood flow is increased.
- C. Hyperventilation should be avoided during the first 24 hours after injury.
- D. Consumptive coagulopathy can occur.

Select the correct answer using the codes given below :

- (1) A, C, D
- (2) B, C
- (3) A, B, D
- (4) A, C
- (5) Question not attempted

10. Which of the following is the most rapid manoeuvre available for lowering ICP in a patient with a large intracranial mass?

- (1) Furosemide, 1 mg/kg IV
- (2) Mannitol, 1 g/kg IV
- (3) Methylprednisolone, 30 mg/kg IV
- (4) Hyperventilation to 25 mm Hg PaCO₂
- (5) Question not attempted

11. Which one of the following statements is not true regarding anaesthesia for elective neurosurgery?

- (1) Desflurane is the agent of choice for many neuroanaesthetists.
- (2) Dense neuromuscular blockade is required for a craniotomy.
- (3) No anaesthetic agent has consistently been shown to be protective against global ischemia.
- (4) The combined use of mannitol and furosemide to decrease the ICP may be synergistic but requires close monitoring of the serum potassium concentration.
- (5) Question not attempted

12. Cerebral autoregulation is abolished by

- (1) Hyperbaric oxygen
- (2) Cardiopulmonary bypass with a core temperature of 27 °C
- (3) Chronic hypertension
- (4) 3% Isoflurane
- (5) Question not attempted

13. The various monitoring techniques to diagnose the occurrence of venous air embolism are

- A. Precordial Doppler
- B. Expired CO₂ monitoring
- C. Trans-oesophageal echocardiography TEE
- D. ECG

Arrange these methods in order of sensitivity (more sensitive to less sensitive). Select the correct answer using the codes below :

- (1) C, A, B, D
- (2) A, C, B, D
- (3) B, D, A, C
- (4) D, B, C, A
- (5) Question not attempted

14. A female patient of morbid obesity is to be taken for Roux-en-Y gastric bypass surgery. Which of the following statements is/are true for the ventilatory management of this patient?

- A. In obese patients, expiratory reserve volume and functional residual capacity are decreased but vital capacity and inspiratory capacity are increased.
- B. Positive end-expiratory pressure (PEEP) should be applied only after intubation but not during mask ventilation.
- C. Increasing tidal volume incrementally from 13 to 22 ml/kg in obese patients ventilated under general anaesthesia does not improve the gas exchange defect but increases the airway pressure.
- D. Recruitment maneuver is indicated intraoperatively.

Select the correct answer using the codes given below :

- (1) A, B, C (2) B, C, D
- (3) C, D (4) A, D
- (5) Question not attempted

15. During carotid endarterectomy, blood pressure suddenly decreases from 140/90 mm Hg to 80/50 mm Hg. The ECG shows a HR of 42/min with normal sinus rhythm and occasional premature ventricular contractions. The most appropriate therapy is IV administration

- (1) Atropine (2) Epinephrine
- (3) Isoproterenol (4) Phenylephrine
- (5) Question not attempted

16. A 23-years-old male undergoes a closed reduction of a fracture of his right femur. In the immediate postoperative period, he becomes tachypneic and confused. Which of the following findings most strongly suggest fat embolism?

- (1) Axillary petechiae
- (2) Emboli present in the retina
- (3) ESR normal
- (4) Fat globules present in the sputum
- (5) Question not attempted

17. The sensory block level of Spinal anaesthesia for Trans Urethral Resection of Prostate (TURP) should not be above T₉. The most appropriate reason is

- (1) It will mask the symptoms of accidental perforation of the bladder or prostatic capsule.
- (2) It may cause excessive bleeding.
- (3) It may cause extreme bradycardia and hypotension in an elderly patient.
- (4) There will be more chances of fluid absorption and TURP syndrome.
- (5) Question not attempted

18. A 89-years-old gentleman is posted for a TURP. Which of the following is not true?

- (1) As irrigation fluid water provides excellent visibility.
- (2) Irrigation fluid is usually absorbed by the patient at a rate of 20 ml/min.
- (3) Absorption of irrigation fluid appears to be dependent on the duration of resection as well as the height (pressure) of the irrigation fluid.
- (4) Mortality is 0.5-6%. Myocardial infarction, pulmonary oedema and renal failure are the rare causes of death.
- (5) Question not attempted

19. A patient of Liver failure is suspected of having Hepatic encephalopathy. Which of the following are factors which can precipitate it?

- A. Hypokalemia
- B. Anaemia
- C. Acidosis
- D. Gastrointestinal bleeding

Select the correct answer using the codes below :

- (1) A, C, D (2) A, B, D
- (3) A, C (4) B, C
- (5) Question not attempted

20. Which of the following laboratory values is most likely to confirm adequate synthetic hepatic function ?
- (1) Glutathione-S-Transferase
 - (2) Prothrombin time
 - (3) Serum alanine aminotransferase
 - (4) Total serum bilirubin
 - (5) Question not attempted
21. Which of the following statement is not true for the management of thyroid storm occurring postoperatively in thyroid surgery ?
- (1) IV administration of glucose-containing crystalloid solutions should be given.
 - (2) β -Blockers should be given to decrease heart rate.
 - (3) Hydrocortisone 100-200 mg every 8 hours should be used to decrease conversion of T4 to T3.
 - (4) IV propylthiouracil can be given.
 - (5) Question not attempted
22. Total hip replacement surgery was going on, suddenly it complicated with the bone cement implantation syndrome. All are true about the syndrome except :
- (1) Hypoxia and hypotension
 - (2) Pulmonary hypertension
 - (3) Decreased cardiac output
 - (4) This is due to the hypersensitivity to methylmethacrylate monomer component of cement
 - (5) Question not attempted
23. A 45-years-old man with a history of gall stones presents to the emergency department complaining of severe constant epigastric pain radiating to the back and flanks and vomiting. Examination reveals pyrexia, abdominal distension, rebound tenderness and discolouration of the flanks. Which of the following blood tests would be most useful in the diagnosis of acute pancreatitis ?
- (1) Serum amylase
 - (2) Serum trypsinogen
 - (3) Serum lipase
 - (4) Serum transaminases
 - (5) Question not attempted
24. A patient of Pheochromocytoma is being operated for removal of the gland. During surgery, significant hypotension occurs following tumour vein ligation. The most probable reason is
- (1) Excessive bleeding.
 - (2) An immediate decrease in plasma catecholamine levels.
 - (3) Increased anaesthetic depth.
 - (4) Inadequate preoperative α -blockade with phenoxybenzamine.
 - (5) Question not attempted
25. Which one of the following anaesthetic considerations for patients with Rheumatoid Arthritis is not true ?
- (1) There is limited TMJ movement and narrow glottis opening.
 - (2) Cervical spine involvement is not present in this condition.
 - (3) Pericarditis can be present in these patients.
 - (4) Diffuse interstitial fibrosis can be seen in these patients.
 - (5) Question not attempted
26. A 56-years-old female is scheduled for a right total shoulder replacement in the beach chair position. Medical history is significant for hypertension, diabetes and a recent transient ischemic attack. The surgeon is requesting a hypotensive technique to reduce intraoperative blood loss. Where is the most optimal location to place the arterial line transducer ?
- (1) Level of shoulder to measure adequate shoulder perfusion.
 - (2) Level of the external meatus to monitor brain stem perfusion.
 - (3) The level of the heart as this is the classic way of measuring.
 - (4) The level of the sternum to measure adequate perfusion to the brain.
 - (5) Question not attempted

27. Fat Embolism Syndrome can occur in patients with long bone fracture. Which of the following is/are its features?

- A. Petechial rash present on lower abdomen, feet and legs.
- B. Respiratory acidosis
- C. Mental status changes
- D. It can also trigger systemic inflammatory response.

Select the correct answer using the codes below :

- (1) A, B, D (2) B, C
- (3) C, D (4) A, B, C
- (5) Question not attempted

28. Despite the presence of a regional anaesthesia effect, that is adequate for the surgery, tourniquet pain may occur after 60 minutes of the tourniquet inflation. The cause of the tourniquet pain may be due to

- (1) Unblocking of myelinated fibers during recession of a neuraxial block.
- (2) Unblocking of unmyelinated fibers during recession of a neuraxial block.
- (3) Mechanical trauma to nerves
- (4) All of these
- (5) Question not attempted

29. For a non-treatable malignancy medical oncologist prescribed morphine as a palliative therapy. The long-term use of morphine is associated with the development of the following except :

- (1) Reduced libido
- (2) Erectile dysfunction
- (3) Hypertension
- (4) Immune dysfunction
- (5) Question not attempted

30. The shelf life of packed red blood cells can be extended to _____ days, when AS-1 (Adsol) is used as an additive solution.

- (1) 21 (2) 28
- (3) 42 (4) 56
- (5) Question not attempted

31. A patient of Kyphoscoliosis is to be taken for surgery. Which of the following problems can be seen in this patient?

- A. Patient can have pulmonary hypertension.
- B. Pulmonary dysfunction such as infection or bronchospasm should be corrected before elective surgery.
- C. Patients can have Obstructive lung disease.
- D. A Cobb angle of more than 15 degrees is considered severe.

Select the correct answer using the codes below :

- (1) A, C, D (2) B, D
- (3) A, B (4) C, D
- (5) Question not attempted

32. The hypoxic mixture to the patient can be delivered in all of the following conditions except

- (1) Leaks upstream from safety devices.
- (2) Dilution of the inspired oxygen concentration by high concentrations of inhaled anaesthetic agents.
- (3) Wrong gas supply.
- (4) Administration of a fourth inert gas (e.g., helium)
- (5) Question not attempted

33. A patient is to be taken for lung biopsy through minimal invasive video assisted Thoracoscopic surgery. Which one of the following statements is not true?

- (1) It causes less inflammatory reaction than open thoracotomy.
- (2) Can be done under Intercostal nerve block which should be performed at the level of the incision and two interspaces above and below.
- (3) It can be done under local anaesthesia with the patient awake but shunt fraction can increase.
- (4) It is always to be done under general anaesthesia.
- (5) Question not attempted

34. Which one of the following statements is true for Day care surgeries?

- (1) Age more than 60 years is a contraindication to Day care surgery.
- (2) There is reduced incidence of postoperative cognitive dysfunction in elderly patients after ambulatory surgery compared to similar procedures performed on an inpatient basis.
- (3) Obese patients are absolute contraindication for Day care surgeries.
- (4) Anticipated difficult intubation is a contraindication for Day care surgeries.
- (5) Question not attempted

35. Despite administration of packed red blood cells and fresh frozen plasma, the patient continues to bleed from the stump. Thromboelastometry of whole blood is performed using a Rotational Thromboelastometry (ROTEM®) machine. Initial ROTEM® results by the External Thromboelastometry (EXTEM) are: Clotting Time (CT) 32 seconds (normal range is 38 – 79s), Clot Formation Time (CFT) 507 seconds (normal range is 34-159s), Maximum Clot Firmness (MCF) 28 mm (normal range is 50 – 72 mm), The FIBTEM MCF is 16 mm (normal range is 10 – 25 mm). Appropriate statement regarding this patient's coagulation include

- (1) He requires platelets transfusion.
- (2) He requires plasma transfusion
- (3) He requires cryoprecipitate transfusion.
- (4) He requires packed red blood cells transfusion.
- (5) Question not attempted

36. Which of the following is true regarding the anaesthesia techniques for Day care surgery?

- (1) Selective spinal anaesthesia is a good choice.
- (2) Epidural anaesthesia is the neuraxial anaesthesia of choice.
- (3) Neuromuscular blocking drugs (NMBDs) should not be used in ambulatory anaesthesia.
- (4) Volatile anaesthetic agents should not be used for Day care surgery.
- (5) Question not attempted

37. Indication of cardiopulmonary exercise testing is

- (1) Predicted Postoperative FEV1 $FEV1 < 50\%$
- (2) Predicted Postoperative FEV1 $FEV1 < 30\%$
- (3) Predicted Postoperative FEV1 $FEV1 < 40\%$
- (4) Predicted Postoperative FEV1 $FEV1 < 60\%$
- (5) Question not attempted

38. Expected Cardiac Event Risk with Revised Cardiac Risk Index > 3

- (1) 0.4% (2) 1%
- (3) 2.4% (4) 5.4%
- (5) Question not attempted

39. What are general perioperative indications for temporary pacing?

- (1) Any documented symptomatic bradyarrhythmia
- (2) Second-degree (type II) AV block or third-degree AV block associated with MI
- (3) Refractory supraventricular tachyarrhythmias
- (4) All of these
- (5) Question not attempted

40. The most common cardiac side effect of Serotonin 5-HT₃ Receptor Antagonist (Ondansetron) used for PONV in Day care surgery patients is

- (1) Tachycardia
- (2) QT interval prolongation
- (3) Severe hypotension
- (4) Increase in pulmonary vascular resistance
- (5) Question not attempted

41. Accidental injection of air into a peripheral vein would be least likely to result in arterial air embolism in a patient with which of the following anatomic cardiac defects ?
- (1) Patent ductus arteriosus
 - (2) Eisenmenger's syndrome
 - (3) Teratology of Fallot
 - (4) Pulmonary atresia with ventricular septal defect
 - (5) Question not attempted
42. Severe post-tonsillectomy haemorrhage occurs in a child of 5 years in the ward. The choice of technique for Induction and Intubation is
- (1) Inhaled induction should be done.
 - (2) Should be performed under local anaesthesia.
 - (3) Rapid sequence induction with cricoid pressure should be performed.
 - (4) Awake intubation should be done.
 - (5) Question not attempted
43. A 70-years-old female with myopia is scheduled to have a cataract operation. She is known to have COAD and has been on a home nebulizer for the last 6 months. She also takes warfarin for atrial fibrillation; her most recent INR was 2.2. Which one of the following is the most appropriate anaesthetic technique ?
- (1) Retrobulbar block
 - (2) Peribulbar block
 - (3) Sub-Tenon's block
 - (4) General anaesthetic with endotracheal intubation
 - (5) Question not attempted
44. Which one of the following is true if oculocardiac reflex occurs during eye surgery ?
- (1) It is most common with traction on the lateral rectus muscle.
 - (2) The response fatigues with repeated stimulation.
 - (3) The reflex is seen less if the surgery is done under topical anaesthesia.
 - (4) There are more chances if depth of anaesthesia is more.
 - (5) Question not attempted
45. A 12-years-old girl with a history of cerebral palsy underwent insertion of a cochlear implant into the right ear under general anaesthesia. She had not received her morning does of regular medications. The procedure took 3 hours with no adverse events during the intra operative period and recovery. On return to the ward, she experienced nausea and one episode of vomiting. About 6 hours later she became very disorientated and developed dystonia and painful muscle spasms. Which of the following regular medications would be the most likely to lead to these clinical features ?
- (1) Ondansetron
 - (2) Sodium valproate
 - (3) Ibuprofen
 - (4) Baclofen
 - (5) Question not attempted
46. A child of foreign body aspiration came to the ENT surgeon. Which is not true ?
- (1) Children one to three years of age are most susceptible to such aspiration.
 - (2) Cough, wheezing and decreased air entry into affected lung are the common clinical features.
 - (3) A chest radiograph during exhalation demonstrating hyperinflation of the affected lung with atelectasis distal to the foreign body.
 - (4) A rapid sequence induction must always be performed because an empty stomach cannot be guaranteed.
 - (5) Question not attempted

47. If anaesthesia is to be conducted in a patient being treated with MAOIs, which of the following statements are true?

- A. Benzodiazepines should not be given for preoperative anxiety.
- B. Anaesthetic requirements of volatile anaesthetic agents is increased.
- C. Ketamine is the choice of IV agent.
- D. The choice of non-depolarizing muscle relaxants is not influenced by treatment with MAOIs.

Select the correct answer by using the codes given below:

- (1) A, B, D (2) B, C
- (3) B, D (4) A, C, D
- (5) Question not attempted

48. A 41-years-old primigravida has been admitted at 38 weeks of gestation with headache, nausea and a blood pressure of 196/116 mm Hg. A Caesarean section is planned and oral labetalol 400 mg has been administered. The next BP recorded an hour later is 176/110 mm Hg. The next step in the control of this women's pre-eclampsia should be

- (1) Intravenous magnesium sulphate infusion, following a loading dose.
- (2) Intravenous labetalol infusion.
- (3) Sublingual nifedipine tablet
- (4) Epidural analgesia
- (5) Question not attempted

49. During pregnancy exposure to anaesthetic agents may precipitate preterm labour, growth retardation of foetus, minor morphological abnormalities, teratogenic effects or even IUD may occur. Which period of pregnancy is more crucial for teratogenic effects of these agents?

- (1) First 2 weeks of intrauterine life
- (2) 3-8 weeks of intrauterine life
- (3) 9-12 weeks of intrauterine life
- (4) 13-20 weeks of intrauterine life
- (5) Question not attempted

50. The neuraxial labour analgesia in a pregnant patient

- (1) Increases the length of the first stage of labour.
- (2) Does not increase the second stage of labour.
- (3) Controls the haemodynamic effects of repetitive Valsalva maneuvers during labour, in women with cardiac or vascular conditions.
- (4) Epidural labour analgesia may cause injury of the perineum during delivery because of causing tearing of tissues instead of stretching of tissues.
- (5) Question not attempted

51. During normal delivery following the placenta removal, uterine fundus inverted through the cervix. Which of the following drug will be used for restoration of uterus of its normal position?

- (1) Thiopentone
- (2) Suxamethonium
- (3) Halothane
- (4) Salbutamol
- (5) Question not attempted

52. Which of the following statements is true for Remifentanyl used for intravenous opioid analgesic for labour analgesia?

- (1) The major risk of remifentanyl when used for labour analgesia, is maternal respiratory depression.
- (2) Fentanyl is more effective than Remifentanyl for intravenous opioid analgesia.
- (3) The incidence of pruritus, nausea and vomiting is more with use of opioids in epidural analgesia than IV labour analgesia.
- (4) It is more rapidly metabolized in the maternal plasma than in the placenta by placental esterases and fetal-to-maternal ratio is tenfold.
- (5) Question not attempted

53. A 26-years-old gravida 3, para 2 parturient is anaesthetized for emergency cesarean section. On emergence from general anaesthesia, after extubation patient becomes cyanotic. Oxygen is administered by positive-pressure bag and mask ventilation. High airway pressures are necessary to ventilate the patient and wheezing is noted over both lung fields. The patient's blood pressure falls from 120/80 to 60/30 mm Hg and heart rate increases from 105 to 180 beats/min. The MOST likely cause of these manifestations is-
- (1) Amniotic fluid embolism
 - (2) Aspiration
 - (3) Pneumothorax
 - (4) Mucous plug in trachea
 - (5) Question not attempted
54. Regarding the pre-eclamptic patient which is false?
- (1) Blood pressure control and seizure prevention are the primary aims of treatment.
 - (2) Parenteral labetalol or hydralazine is used to control blood pressure.
 - (3) Seizure prophylaxis is accomplished with magnesium therapy. Usually given IV 4 gm load over 15 min, followed by continuous infusion 1-3 g/h.
 - (4) Therapeutic level of magnesium are 6-12 mEq/L and respiratory arrest occur if it is over 15 mEq/L.
 - (5) Question not attempted
55. Which of the following is not a feature or complication of Pre eclampsia?
- (1) Cerebral edema
 - (2) Placental abruption
 - (3) Hypervolemia
 - (4) Grand mal seizures
 - (5) Question not attempted
56. All of the following are anaesthetic considerations for non-obstetric surgery in the pregnant patient except
- (1) Postpone elective surgeries until after delivery
 - (2) Left uterine displacement during whole gestational age to relieve aortocaval compression
 - (3) Regional anaesthesia should be utilized when possible
 - (4) Consider anti-aspiration prophylaxis
 - (5) Question not attempted
57. In an obstetric patient with mitral stenosis, taken for cesarean delivery, the highest chances of cardiac decompensation is
- (1) At the time of patient made supine just after Neuraxial block.
 - (2) 12-24 hrs after delivery.
 - (3) At the time of uterine contraction just after delivery of foetus.
 - (4) Third day post partum.
 - (5) Question not attempted
58. All of the following are the good pain relief techniques for labour analgesia except
- (1) Continuous Epidural infusion
 - (2) Patient-controlled Epidural analgesia
 - (3) Paracervical block
 - (4) Pudendal block
 - (5) Question not attempted
59. Assertion (A) : Magnesium sulphate is the anticonvulsant of choice in Eclampsia
Reason (R) : Because it is more effective and has better safety profile.
- (1) Both (A) and (R) are individually true and (R) is the correct explanation of (A).
 - (2) Both (A) and (R) are individually true and (R) is not the correct explanation of (A).
 - (3) (A) is true but (R) is false.
 - (4) (A) is false but (R) is true.
 - (5) Question not attempted

60. The following respiratory parameters are decreased in the elderly :
- (1) Closing capacity
 - (2) Residual volume
 - (3) Total lung capacity
 - (4) All of these
 - (5) Question not attempted
61. A 68-years-old male patient is admitted to the intensive care unit (ICU) with lethargy and shortness of breath. His past medical history includes hypertension, non-insulin-dependent diabetes, ischaemic heart disease and impaired renal function. His current medication includes metformin and gliclazide. Soon after admission to the ICU, he is sedated, intubated and ventilated. The subsequent blood gas analysis reveals a pH of 7.08 and a lactate of 18 mmol/L. The most appropriate measure to correct the acidosis includes:
- (1) Hyperventilation
 - (2) Intravenous sodium bicarbonate
 - (3) Intravenous insulin.
 - (4) Haemodialysis.
 - (5) Question not attempted
62. Which of the following is not a screening tool to identify geriatric patients who are likely to have post operative cognitive dysfunction?
- (1) Mini-Mental State Examination (MMSE)
 - (2) Minicog
 - (3) Barthel Index
 - (4) Clock-drawing Test
 - (5) Question not attempted
63. A 65-years-old male is undergoing elective posterior fossa surgery in the sitting position. Forty minutes into the operation, his blood pressure drops suddenly from 110/70 mm Hg to 70/40 mm Hg and develops bronchospasm. In the previous 20 minutes the patient had not received any drugs. What is the most likely cause ?
- (1) Anaphylaxis
 - (2) Air embolism
 - (3) Myocardial infarction
 - (4) Profuse bleeding
 - (5) Question not attempted
64. All of the following are the absolute indication for renal replacement therapy except
- (1) Severe metabolic acidosis
 - (2) Hyperkalemia
 - (3) Fluid overload
 - (4) Raised Creatinine
 - (5) Question not attempted
65. Which of the following statements are true for cardiovascular changes in geriatric patients ?
- A. Progressive stiffness and thickening of arteries, but the aortic lumen increases in diameter.
 - B. Aortic valve becomes thickened and calcified.
 - C. Atrial fibrillation is the most common arrhythmia present.
 - D. Systolic dysfunction is common while diastolic function remains well preserved.
- Select the correct answer using the codes given below :
- (1) A, B, D
 - (2) B, C
 - (3) A, B, C
 - (4) C
 - (5) Question not attempted
66. Triangle of Petit is related to
- (1) Three in one block
 - (2) Cervical plexus block
 - (3) Transverse abdominus plane block
 - (4) Psoas compartment block
 - (5) Question not attempted
67. Which of the following is not a sign of successful stellate ganglion block ?
- (1) Anhidrosis
 - (2) Guttman sign
 - (3) Horner's syndrome
 - (4) Bradycardia
 - (5) Question not attempted

68. Sciatic nerve blockade provides sensory loss of the
- (1) Anterior and lateral thigh
 - (2) Medial and posterior thigh
 - (3) Medial leg below the knee
 - (4) Posterior thigh and majority of the leg below the knee
 - (5) Question not attempted
69. Regression of neural blockade after subarachnoid block results from a decline in the CSF drug concentration which is caused by
- (1) Drug metabolism in the CSF.
 - (2) Vascular absorption in the vessels of the pia matter
 - (3) Exit through the intervertebral foramina
 - (4) Taken up by the nerve fibers to peripheral tissue
 - (5) Question not attempted
70. The phase of liver transplantation, where the greatest degree of haemodynamic instability is expected is
- (1) Induction
 - (2) Dissection phase
 - (3) Anhepatic phase
 - (4) Neohepatic phase
 - (5) Question not attempted
71. Below what glomerular filtration rate is renal replacement therapy usually commenced?
- (1) 100 ml/min/1.73m³
 - (2) 50 ml/min/1.73m³
 - (3) 30 ml/min/1.73m³
 - (4) 15 ml/min/1.73m³
 - (5) Question not attempted
72. Regarding the provision of anaesthesia for ENT surgery, which one of the following statements is most correct?
- (1) For functional endoscopic sinus surgery, given the operation's proximity to the patient's eyes, the eyes must be taped and padded.
 - (2) Of the various lasers available, carbon dioxide lasers do have the capacity to ignite endotracheal tubes.
 - (3) In myringoplasty using an overlay graft, use of nitrous oxide as part of the inhaled gas mixture is actually likely to be beneficial.
 - (4) In parotidectomy, neuromuscular blockade is recommended because coughing can cause surgical field disruption and significant haemorrhage.
 - (5) Question not attempted
73. Which of the following statement is not true for Laser surgery?
- (1) Laser vaporization of tissue by CO₂ causes a plume of smoke but this is not hazardous.
 - (2) The oxygen should be used in lowest safe concentration.
 - (3) Venous gas embolism can occur.
 - (4) Endotracheal tube cuff should be filled with saline.
 - (5) Question not attempted
74. According to Apfel and colleagues scoring system, the predicted risk factors for postoperative nausea and vomiting (PONV) after ambulatory surgery are all except
- (1) Female
 - (2) Smoker
 - (3) History of previous PONV
 - (4) Postoperative use of opioids
 - (5) Question not attempted

75. Which of the following materials is compatible in a MRI suit and so patients with devices made from this can be scanned in MRI suit?
- (1) Titanium
 - (2) Stainless steel
 - (3) Iron
 - (4) Cobalt
 - (5) Question not attempted
76. History, sign and symptoms of complex regional pain syndrome type 1 (CRPS type 1) includes all except:
- (1) Initial noxious event
 - (2) Allodynia
 - (3) Pain disproportionate to injury
 - (4) Proximal symptoms only
 - (5) Question not attempted
77. Integration of peripheral nociceptive and descending modulatory input for pain occurs in
- (1) Ventral horn of the spinal cord
 - (2) Dorsal horn of the spinal cord
 - (3) Ventrolateral horn of the spinal cord
 - (4) Ventromedial horn of the spinal cord
 - (5) Question not attempted
78. 62-years-old male is brought to the ICU after elective repair of an abdominal aortic aneurysm. His vital signs are stable, but he requires a sodium nitroprusside infusion at a rate of 10 $\mu\text{g/kg/min}$ to keep the systolic blood pressure below 110 mm Hg. The SaO_2 is 98% with controlled ventilation at 12 breaths/min and an FiO_2 of 0.60. After 3 days, his SaO_2 decreases to 85% on the pulse oximeter. Chest X-ray film and results of physical examination are unchanged. Which of the following would most likely account for this desaturation?
- (1) Cyanide toxicity
 - (2) Thiocyanate toxicity
 - (3) Thiosulfate toxicity
 - (4) Methemoglobinemia
 - (5) Question not attempted
79. Total parenteral nutrition (TPN) needed for critically ill patients, all are true about TPN except :
- (1) In this formula amino acids and glucose mixed together. Due to hypotonic nature of these solutions requires central venous access.
 - (2) Parenteral glucose solutions provide only 3.4 kcal/g (compared to 4 kcal/g for the dry carbohydrate) because there glucose concentration is expressed as the monohydrate.
 - (3) They may cause hepatic dysfunction.
 - (4) There may be fat embolism syndrome due to this formula.
 - (5) Question not attempted
80. The semi-quantitative (base deficit/excess approach) for metabolic acidosis is
- (1) Copenhagen approach
 - (2) Boston approach
 - (3) Anion gap approach
 - (4) Delta anion gap approach
 - (5) Question not attempted
81. A patient of neuropathic pain was on a certain analgesic drug which caused increased anaesthetic requirements, prolonged PR interval & widening of QRS complex intraoperatively and delirium in post operative unit. The most probable drug the patient must be on is
- (1) Morphine
 - (2) Ketamine
 - (3) Amitryptaline
 - (4) NSAIDs
 - (5) Question not attempted

82. A 44-years-old female presents with generalized body pain. She feels lethargic and also complains of depression. She has generalized muscle tenderness all over her body. She is known to have irritable bowel syndrome. What is the most likely diagnosis?
- (1) Muscular dystrophy
 - (2) Chronic fatigue syndrome
 - (3) Fibromyalgia
 - (4) Rheumatoid arthritis
 - (5) Question not attempted
83. As per Surviving Sepsis Campaign guidelines, the correct sequence of management in sepsis is
- A. Fluid administration
 - B. Antibiotic
 - C. Vasopressor Nor epinephrine
 - D. Corticosteroids
- Select the correct answer using the codes given below :
- (1) A, D, C, B
 - (2) A, C, D, B
 - (3) B, A, C, D
 - (4) C, B, D, A
 - (5) Question not attempted
84. For the management of septic shock which is true ?
- (1) Start vasopressors if BP is not responding to initial fluid resuscitation and CVP is above 8 mmHg.
 - (2) Low-dose corticosteroids can be given but after performing ACTH stimulation test (short synacthen).
 - (3) If patient already have two wide bore cannula than no need of insertion of central venous line.
 - (4) All of these
 - (5) Question not attempted
85. In Cyanide poisoning, venous oxygen saturation will be
- (1) Normal
 - (2) High
 - (3) Low
 - (4) Very low (<5 mm Hg)
 - (5) Question not attempted
86. Palliative care should begin
- (1) At the time of diagnosis
 - (2) During the treatment phase
 - (3) During the end-of-life phase
 - (4) When the disease is incurable
 - (5) Question not attempted
87. False Statement regarding transfusion-related acute lung injury (TRALI)
- (1) TRALI is the leading cause of transfusion-related mortality.
 - (2) Symptoms and signs appear 24 hours after transfusion.
 - (3) Fresh Frozen Plasma is most common caustic factors.
 - (4) Most patients recover within 96 hours.
 - (5) Question not attempted
88. The primary benefit of positive end-expiratory pressure (PEEP) during mechanical ventilation is
- (1) Prevention and reversal of alveolar collapse
 - (2) Improved elimination of CO₂
 - (3) Reduction in peak inspiratory pressure
 - (4) Improved venous return and cardiac output
 - (5) Question not attempted

89. A patient of blunt chest trauma is brought to casualty room of a trauma center. The patient is looking extremely anxious, is sitting in upright position, frightened. On examination, jugular venous pressure is raised, heart sounds is muffled. The most probable condition he has is
- (1) Tension pneumothorax
 - (2) Flail chest
 - (3) Pericardial tamponade
 - (4) Massive haemothorax
 - (5) Question not attempted
90. Which of the following statement is not true for Pulmonary artery catheter Monitoring ?
- (1) When the pulmonary catheter is inserted 40-45 cm, it should have reached Right atrium.
 - (2) The pulmonary capillary wedge position waveform is similar in morphology to right atrium.
 - (3) In mitral regurgitation, the tall "v" wave is seen in wedge pressure trace.
 - (4) Normal mean pulmonary artery pressure is 15 mm Hg.
 - (5) Question not attempted
91. Estimated right atrial pressure in condition of inferior vena cava collapsibility of >50% and IVC diameter <2.1 cm is
- (1) 3 mm Hg
 - (2) 8 mm Hg
 - (3) 10 mm Hg
 - (4) 15 mm Hg
 - (5) Question not attempted
92. Regarding BIS monitoring which one is false ?
- (1) It uses EEG.
 - (2) A higher reading is associated with deeper anaesthesia.
 - (3) The target reading is 40-60.
 - (4) The range is 0-100.
 - (5) Question not attempted
93. At what level of train of four (TOF) ratio denote the adequate recovery of neuromuscular function ?
- (1) TOF ratio of 0.60
 - (2) TOF ratio of 0.70
 - (3) TOF ratio less than 0.80
 - (4) TOF ratio at least 0.90
 - (5) Question not attempted
94. Which one of the following statements about Xenon is not true ?
- (1) MAC of Xenon is 63% to 71%.
 - (2) Xenon has lower blood : gas partition co-efficient than nitrous oxide.
 - (3) Xenon causes an increase in respiratory rate.
 - (4) Xenon has a NMDA receptors antagonist effect.
 - (5) Question not attempted
95. In which condition intraoperative cell salvage is not indicated ?
- (1) Crossmatch-compatible blood is unobtainable.
 - (2) Patient is unwilling to accept allogeneic blood.
 - (3) Anticipated blood loss is 10% patient's estimated blood volume.
 - (4) The procedure is likely to require more than one unit of RBCs.
 - (5) Question not attempted

96. Blue protocol is related to
- (1) Lung ultrasound
 - (2) Abdominal ultrasound
 - (3) Cardiopulmonary resuscitation
 - (4) Not related to any of these
 - (5) Question not attempted

97. McSleepy is a type of AI generated drug delivery system. Which of the following sentences are true?

- A. It is a Closed loop drug delivery system.
- B. It is an open loop target controlled infusion drug delivery system.
- C. It is for combination of propofol, remifentanyl and rocuronium.
- D. It only uses BIS for feedback.

Select the correct answer using the codes given below :

- (1) A, C, D (2) B, D
- (3) A, D (4) A, C
- (5) Question not attempted

98. During intubation of a patient for emergency laparotomy you noticed damage to his tooth. Regarding dental damage under general anaesthesia which statement is false?

- (1) Tooth damage is the most common cause of malpractice claims against anaesthesiologists.
- (2) Risk is greater in patients deemed difficult to intubate.
- (3) There is an increased risk during emergency intubation.
- (4) Maxillary incisors are the most commonly damaged.
- (5) Question not attempted

99. National surgical quality improvement project (NSQIP) requires how many days follow up on all patients to develop robust risk-adjusted models of morbidity and mortality?

- (1) 15 days (2) 30 days
- (3) 45 days (4) 60 days
- (5) Question not attempted

100. Which of the following statement is not true regarding a patient making Informed refusal?

- (1) A patient can make requests to withdraw or withhold life-supporting care in the ICU.
- (2) A patient can make requests for Do-Not-Attempt Resuscitation (DNAR) orders in the operating room.
- (3) A patient can make informed refusals of blood transfusions.
- (4) A patient can not refuse for preoperative testing for immunodeficiency virus (HIV) or pregnancy testing before a procedure.
- (5) Question not attempted

101. According to the 2015 ASA Task Force on Perioperative Blood Management, not a indication of cryoprecipitate transfusion except

- (1) When fibrinogen concentrations are less than 80 to 100 mg/dl in patients experiencing excessive bleeding.
- (2) In patients undergoing massive transfusion when the timely assessment of fibrinogen concentrations cannot be determined.
- (3) Obstetrical patients who are experiencing excessive bleeding despite a measured fibrinogen concentration greater than 150 mg/dl.
- (4) When testing of fibrinogen activity reveals no evidence for fibrinolysis.
- (5) Question not attempted

102. For elective procedures, an anaesthesia provider must obtain informed and preferably written consent

- (1) During preoperative anaesthetic evaluation
- (2) A day before the plan of surgery
- (3) At the same time that a surgeon obtains consent for the surgical procedure
- (4) Just before transferring the patient to the operating room for surgery
- (5) Question not attempted

103. Which of the following is true for Chains of Survival in case of a cardiac arrest as per American Heart Association guidelines 2020 for CPR & ECC?

- (1) A new link "Recovery" has been added to the In hospital Cardiac Arrest (IHCA) in Chains of Survival.
- (2) A new link "Recovery" has been added to the Outside Hospital Cardiac Arrest (OHCA) in Chains of Survival.
- (3) A new link "Recovery" has been added to the IHCA and OHCA in Chains of Survival.
- (4) No new link has been added to the Chains of Survival.
- (5) Question not attempted

104. A 23-years-old man suddenly collapses and becomes unresponsive. You witness him collapse and are the first rescuer at the scene. You find him lying motionless on the college floor. The man does not respond when you tap his shoulders and shout - Are you Ok? What is your next action?

- (1) Verify the scene is safe for you and victim
- (2) Shout for nearby help
- (3) Start high quality CPR
- (4) Start providing rescue breath
- (5) Question not attempted

105. A 45-years-old male with a history of ischaemic heart disease is undergoing for resection anastomosis of the gut. During the operation he becomes increasingly hypotensive to a blood pressure of 75/42 mmHg and you notice a change in her cardiac rhythm and suspect complete heart block. Which of the following are not true?

- (1) Right coronary artery infarction is a likely cause.
- (2) Atropine 0.5-1.0 mg, up to 3 mg should be given.
- (3) Epinephrine 2-10 microgram/min infusion would be given.
- (4) Glucagon is definitely indicated.
- (5) Question not attempted

106. As per "Adult Post-Cardiac Arrest Care Algorithm", after ROSC in a cardiac arrest patient, during the initial stabilization phase, the recommended steps and targets are

- (1) Early placement of Endotracheal tube with confirmation by capnography, breaths 10/min, titrate FiO_2 to keep SpO_2 92 - 98%, target PaCO_2 of 35-45 mmHg.
- (2) Early placement of Endotracheal tube with confirmation by capnography, breaths 14-16/min, titrate FiO_2 to keep SpO_2 96 - 98%, target PaCO_2 of 30 - 32 mmHg.
- (3) Early placement of Endotracheal tube with confirmation by capnography, breaths 14 /min, titrate FiO_2 to keep SpO_2 98-100%, target PaCO_2 of 32-35 mmHg.
- (4) First manage haemodynamic parameters by use of vasopressors to maintain SBP of > 75 mmHg & DBP of > 55 mmHg then intubation with ETT and keep breaths 12-14/min, titrate FiO_2 to keep SpO_2 94 to 98%, target PaCO_2 of 30-35 mmHg.
- (5) Question not attempted

107. Reversible causes of cardiopulmonary arrest are all except

- (1) Hypoxia
- (2) Hypercarbia
- (3) Toxins
- (4) Tamponade
- (5) Question not attempted

108. In the 'Research cycle', which of the following steps lies between formulating the study objectives and preparing data collection instruments?

- (1) Data collection
- (2) Data cleaning
- (3) Data analysis plan
- (4) Data analysis
- (5) Question not attempted

109. A multicentric study was conducted to determine the association between diabetes and cataract. The investigators recruited 1000 diabetics and 2500 non-diabetics. The participants were examined to exclude presence of cataract at the time of recruitment. They were followed once yearly for 10 years to document the development of cataract. The study found that the incidence of cataract among diabetics was more when compared with the non-diabetics. Identify the study design in this study?

- (1) Cross-sectional study
- (2) Case control study
- (3) Prospective cohort study
- (4) Experimental study
- (5) Question not attempted

110. Descriptive studies and Analytic studies are type of which of the following study design?

- (1) Parallel group randomized experimental studies
- (2) Observational studies
- (3) Analyses of evidence
- (4) Non randomized experimental studies
- (5) Question not attempted

111. How much is the allowable limit of radiation dose in an year for whole body of a Health personnel? What is meant by Rem?

- (1) The rem is a unit of effective dose of radiation. The maximum allowable limit of radiation exposure for whole body is 5 rem per year.
- (2) The rem is a unit of absorbed dose of radiation. The maximum allowable limit of radiation exposure for whole body is 30 rem per year.
- (3) The rem is a unit of effective dose of radiation. The maximum allowable limit of radiation exposure for whole body is 75 rem per year.
- (4) The rem is a unit of absorbed dose of radiation. The maximum allowable limit of radiation exposure for whole body is 0.5 rem per year.
- (5) Question not attempted

112. Which structure is bypassed in paramedian approach of subarachnoid block?

- (1) Ligamentum flavum
- (2) Supra spinous ligament
- (3) Inter spinous ligament
- (4) Vertebral laminae
- (5) Question not attempted

113. "U-shaped" distribution of local anaesthetic under an artery as seen with ultra sonographically is indicative of success of which block?

- (1) Coeliac plexus block
- (2) Infraclavicular block
- (3) TAP block
- (4) Intercostal block
- (5) Question not attempted

114. Which is not true about larynx ?

- (1) The arytenoid cartilages are paired and each projects anteriorly as the vocal process.
- (2) The thyroid cartilage has two plates which join to form the Adam's apple.
- (3) The cricoid cartilage at the level of C6 articulate with the inferior horn of thyroid cartilage.
- (4) The corniculate cartilages are paired while cuneiform is single.
- (5) Question not attempted

115. Which is true about Liver ?

- (1) Anatomically (morphologically) divided into right and left lobe. Left lobe is approximately six times the size of the right.
- (2) 70% of the blood supply to the liver is via the hepatic artery from the coeliac trunk.
- (3) The portal vein carries blood from the liver and drains into the inferior vena cava.
- (4) Calot's triangle is formed by the lower edge of liver, the common hepatic duct and the cystic duct.
- (5) Question not attempted

116. Regarding acetylcholinesterase inhibitors which statement is not true ?

- (1) Edrophonium has use in the treatment of myasthenia gravis
- (2) Edrophonium can be used to differentiate a cholinergic from a myasthenic crisis
- (3) Neostigmine prolongs depolarizing neuromuscular blockade
- (4) Acetylcholinesterase inhibitors have a treatment role in Alzheimer's disease.
- (5) Question not attempted

117. The stellate ganglion is located at the

- (1) Anterior to the transverse process of the C6 vertebra
- (2) Anterior to the subclavian artery
- (3) Anterior to the neck of the first rib and transverse process of the C7 vertebra
- (4) Lateral to C6 transverse process
- (5) Question not attempted

118. The driving pressure is not affected by

- (1) Tidal volume
- (2) Lung compliance
- (3) PEEP level
- (4) Peak Airway Pressure
- (5) Question not attempted

119. Which of the following properties of epidurally administered local anaesthetics determines the extent to which epinephrine will prolong the duration of blockade ?

- (1) Molecular weight
- (2) Lipid solubility
- (3) pKa
- (4) Concentration
- (5) Question not attempted

120. Which of the following mechanisms is involved in central sensitization ?

- (1) Increased sensitivity of nociceptor
- (2) Wind-up phenomena
- (3) Sympathetically mediated crosstalk
- (4) Spontaneous neuronal activity
- (5) Question not attempted

121. If the internal diameter of an intravenous catheter were doubled, flow through the catheter would be

- (1) Decreased by a factor of 2
- (2) Decreased by a factor of 4
- (3) Increased by a factor of 8
- (4) Increased by a factor of 16
- (5) Question not attempted

122. Which of the following intravenous anaesthetics is converted from a water-soluble to a lipid-soluble drug after exposure to the bloodstream ?

- (1) Fentanyl
- (2) Midazolam
- (3) Ketamine
- (4) Propofol
- (5) Question not attempted

123. When we increase the inspired concentration it not only increases the alveolar concentration but also increases its rate of rise. This is known as

- (1) Augmented inflow effect
- (2) Second gas effect
- (3) Concentration effect
- (4) Concentrating effect
- (5) Question not attempted

124. The medial cord of the brachial plexus is formed by the

- (1) Superior division of the superior and middle trunks
- (2) Anterior division of the inferior trunk
- (3) Inferior divisions of all three trunks
- (4) Superior division of medial and inferior trunk
- (5) Question not attempted

125. Which of the following statement is true for CO_2 transport in the blood ?

- (1) It is transported as dissolved which accounts for approximately 5% of transported CO_2 and is reflected as partial pressure (PaCO_2).
- (2) It is transported as bicarbonate ion (HCO_3^-) which accounts for approximately 90% of transported CO_2 and is reflected as partial pressure (PaCO_2).
- (3) It is transported as carbamino CO_2 (CO_2 bound to terminal amino groups in Hb molecules) which accounts for approximately 5% and is reflected as partial pressure (PaCO_2).
- (4) It is transported as dissolved which accounts for approximately 90% of transported CO_2 and is reflected as partial pressure (PaCO_2).
- (5) Question not attempted

126. Which of the following statement regarding the Circle of Willis is not true ?

- (1) Circle of Willis is formed by the connection of internal carotid arteries and the basilar artery.
- (2) Three paired arteries, anterior, middle and posterior cerebral arteries originate from the Circle of Willis and perfuse the brain.
- (3) The posterior communicating artery and the anterior communicating artery complete the loop.
- (4) There is always a mix of blood between the anterior and posterior circulations under normal circumstances.
- (5) Question not attempted

127. Blue bloaters have all of these features except :

- (1) Severe central cyanosis
- (2) Severe breathless at rest
- (3) Severe hypoxia and high PaCO_2 in ABG
- (4) Secondary polycythemia
- (5) Question not attempted

128. "Visualization of the tip of the epiglottis which can be manipulated with repositioning or an intubating bougie", denotes the Cormack and Lehane grade

- (1) 3a
- (2) 3b
- (3) 2
- (4) 4
- (5) Question not attempted

129. Which of the following can cause a rightward shift of the oxyhaemoglobin dissociation curve ?

- (1) Fetal haemoglobin
- (2) Pregnancy
- (3) Methemoglobinemia
- (4) Hypothermia
- (5) Question not attempted

130. Complete ablation of the gag reflex, before awake intubation requires

- (1) Glossopharyngeal nerve block
- (2) Greater palatine nerve block
- (3) Facial nerve block
- (4) Vagus nerve block
- (5) Question not attempted

131. Which of the following statements for local anaesthetic agent is/are true ?

- A. Local anaesthetic agents have intrinsic vasodilator activity.
- B. Bupivacaine, ropivacaine are the ester group of local anaesthetics.
- C. The most important plasma protein binding site for bupivacaine and ropivacaine is α 1-Acid glycoprotein
- D. Alkalinization of local anaesthetic solutions shortens the onset of neural blockade.

Select the correct answer using the codes given below :

- (1) A, D (2) A, C, D
- (3) B, C (4) B
- (5) Question not attempted

132. Cuffed anatomically preshaped perilaryngeal sealers airway device is

- (1) I-gel
- (2) Buska mask
- (3) SLIPA
- (4) LMA supreme
- (5) Question not attempted

133. A 49-years-old type 1 diabetic patient with a long history of burning pain in the right lower extremity receives a spinal anaesthetic with 100 mg of lignocaine with 5% dextrose. The patient reports no relief in symptoms but has complete bilateral motor blockade. What diagnosis is consistent with this differential blockade examination ?

- (1) Central pain
- (2) Diabetic neuropathy
- (3) Complex Regional Pain Syndrome (CRPS)
- (4) Myofascial pain
- (5) Question not attempted

134. Local anaesthetics may be combined in an effort to produce a rapid onset (chloroprocaine) and prolonged duration (bupivacaine) of action but

Assertion (A) : Placement of chloroprocaine in the epidural space may decrease the efficacy of subsequent epidural bupivacaine-induced analgesia during labour.

Reason (R) : The low pH of the chloroprocaine solution decrease the non-ionized pharmacologically active fraction of bupivacaine.

- (1) Both (A) and (R) are individually true and (R) is the correct explanation of (A).
- (2) Both (A) and (R) are individually true but (R) is not the correct explanation of (A).
- (3) (A) is true but (R) is false.
- (4) (A) is false but (R) is true.
- (5) Question not attempted

135. Bleeding from tonsil after surgery usually occur within the

- (1) First 6 hours
- (2) First 12 hours
- (3) First 24 hours
- (4) First 48 hours
- (5) Question not attempted

136. Which of the following are the components of The Revised Cardiac Risk Index ?

- A. High-risk surgery
- B. History of cerebrovascular disease
- C. Diabetes mellitus requiring insulin
- D. MET score more than 3

Select the correct answer using the codes below :

- (1) A, D (2) A, C, D
- (3) B, D (4) A, B, C
- (5) Question not attempted

137. Surgery and anaesthesia can precipitate thyroid storm in hyperthyroid patients. Which statement is not true about thyroid storm?

- (1) Thyroid storm is a medical emergency that carries a 10-50% mortality.
- (2) Both atrial and ventricular arrhythmias are common.
- (3) Hyperkalemia is present in up to 50% of patients.
- (4) Levels of the thyroid hormones are high in plasma but correlate poorly with the severity of the crisis.
- (5) Question not attempted

138. Factor which does not prolong depolarizing blockade is

- (1) Excessive dose of succinylcholine
- (2) Increased plasma cholinesterase activity
- (3) Extremes of age
- (4) Hormonal changes
- (5) Question not attempted

139. Patients with Hepatic disorders can develop encephalopathy, the first line therapy for this should be

- (1) Diuretic spironolactone
- (2) Correcting anaemia by blood transfusion
- (3) Lactulose (30 ml every 6 hours orally)
- (4) Giving Inj of Vitamin K and fresh frozen plasma
- (5) Question not attempted

140. An Apnoea/Hypopnoea Index (AHI) of 10 means

- (1) Apnoea/Hypopnoea episodes last 10 second
- (2) Episodes of apnoea and hypopnoea occur at a rate of 10 per hour
- (3) Apnoea/Hypopnoea episodes occur at a rate of 10 per sleep cycle
- (4) Episodes of hypopnoea are 10 times more common than apnoea
- (5) Question not attempted

141. The criteria for assessing the adequacy of preoperative treatment of a patient of Pheochromocytoma with Phenoxybenzamine, Prazosin and Beta blockers is

- (1) Arterial blood pressure when the patient is standing should be less than 80/45 mm Hg (Orthostatic hypotension).
- (2) No in-hospital arterial blood pressure reading higher than 165/90 mm Hg should be seen for 48 hours preoperatively.
- (3) The ECG should have heart rate of less than 60/min.
- (4) No more than eight Premature Ventricular Contraction (PVC) should occur in 1 minute.
- (5) Question not attempted

142. A 60-years-old male patient with type II diabetes, hypertension and ischaemic heart disease is undergoing a laparotomy for carcinoma of the sigmoid colon. Which of the following monitors would be the most sensitive detector of intraoperative myocardial ischaemia?

- (1) Dipyrindamole-thallium scanning
- (2) Electrocardiography
- (3) Pulmonary capillary wedge pressure measurement
- (4) Transoesophageal echocardiography
- (5) Question not attempted

143. Which one of the following is not a feature of Pierre-Robin Sequence (PRS)?

- (1) Micrognathia
- (2) Posterior displacement of mandible
- (3) Ventricular septal defect
- (4) Glossoptosis
- (5) Question not attempted

144. Infants require higher doses of suxamethonium per kilogram than do adults because
- (1) Infants have a larger volume of distribution (greater extracellular space)
 - (2) Infants have more motor end plates per kg
 - (3) Infants have a greater proportion of haemoglobin F
 - (4) All of these
 - (5) Question not attempted
145. If a 3-years-old child weighs 15 kg and has a starting haematocrit of 38% and if clinical judgement estimates the desired postoperative haematocrit to be 25%, then what would be the Maximal Allowable Blood Loss (MABL) ?
- (1) 360 ml (2) 300 ml
 - (3) 450 ml (4) 1080 ml
 - (5) Question not attempted
146. Premature neonates are at particular risk of hypocalcemia. If an infant is suspected to have hypocalcemia during anaesthesia, which of the following statement is not true ?
- (1) IV calcium should be considered in newborns presenting with hypotension without an obvious cause.
 - (2) Management of hypocalcemia involves correction of hypocalcemia as well as hypomagnesemia.
 - (3) The starting dose is 10 – 20 mg/kg of elemental calcium.
 - (4) Administration of calcium should be as close as possible to right atrium in the heart.
 - (5) Question not attempted
147. A 2-years-old child weighing 12 kg is scheduled for inguinal hernia repair. The calculated dose of 0.25% bupivacaine for a caudal epidural would be approximately (mL)
- (1) 6 (2) 12
 - (3) 15 (4) 20
 - (5) Question not attempted
148. Regarding anaesthetic management of congenital diaphragmatic hernia all are true except :
- (1) The neonate must be preoxygenated and intubated awake.
 - (2) For better analgesia use nitrous oxide with oxygen.
 - (3) A sudden fall in lung compliance, blood pressure or oxygenation may signal a contralateral pneumothorax.
 - (4) Aggressive attempts at expansion of the ipsilateral lung following surgical decompression are detrimental.
 - (5) Question not attempted
149. Which one of the following statement is not true about the condition of external herniation of abdominal viscera through a small (usually < 5 cm) defect in the anterior abdominal wall in neonate ?
- (1) Protein-containing solutions (5% albumin) should constitute approximately 25% of the replacement fluids.
 - (2) This condition is rarely associated with other congenital anomalies except for intestinal atresia.
 - (3) Primary closure is only recommended if inspiratory pressures are above 25-30 cm H₂O.
 - (4) Upon delivery, the exposed viscera should be covered in warm saline-soaked gauze.
 - (5) Question not attempted
150. The most common reason for organ dysfunction after taking a patient on cardio pulmonary bypass is
- (1) Release of various injurious inflammatory mediators.
 - (2) Chances of hypoxia during this procedure.
 - (3) High chances of infection during it.
 - (4) Hypoperfusion due to excessive blood loss during it.
 - (5) Question not attempted

रफ कार्य के लिए स्थान / SPACE FOR ROUGH WORK

141. Infants require higher doses of sedative/analgesic per kilogram than adults because

(1) Infants have a larger volume of distribution (greater extracellular space)

(2) Infants have a faster motor and blood flow

(3) Infants have a greater proportion of haemoglobin F

(4) All of these

(5) Question not attempted

142. A 2-year-old child weighs 12 kg and has a starting haematocrit of 38% and is clinical judgement estimated the desired postoperative haematocrit to be 25% then what would be the Maximal Allowable Blood Loss (MABL)?

(1) 300 ml (2) 300 ml (3) 150 ml (4) 1080 ml

(5) Question not attempted

143. Which one of the following statement is not true about the condition of external herniation of abdominal contents through a small (usually < 5 cm) defect in the anterior abdominal wall in neonate?

(1) Protein-containing solutions (5% albumin) should constitute approximately 25% of the replacement fluids

(2) This condition is rarely associated with other congenital anomalies except for intestinal atresia

(3) Primary closure is only recommended if intra-abdominal pressures are above 25-30 cm H₂O

(4) Upon delivery, the exposed viscera should be covered in warm saline-soaked gauze

(5) Question not attempted

144. The most common reason for organ dysfunction after taking a parenteral nutrition solution is

(1) Release of various nutrients on cardiac pulmonary bypass

(2) Changes of hypoxia during this procedure

(3) High chances of infection during it

(4) Hypoperfusion due to excessive blood loss during it

(5) Question not attempted

145. A 2-year-old child weighing 12 kg is scheduled for inguinal hernia repair. The calculated dose of 0.3% bupivacaine for a caudal epidural would be approximately

(1) 5 (2) 13 (3) 15 (4) 20

(5) Question not attempted

146. Premature neonates are at particular risk of hypocalcaemia. If an infant is suspected to have hypocalcaemia during anaesthesia, which of the following statement is not true?

(1) IV calcium should be considered in newborns presenting with hypocalcaemia without an obvious cause

(2) Management of hypocalcaemia involves correction of hypocalcaemia as well as hypomagnesaemia

(3) The starting dose is 10-20 mg/kg of elemental calcium

(4) Administration of calcium should be as close as possible to right atrium in the heart

(5) Question not attempted

147. A 2-year-old child weighing 12 kg is scheduled for inguinal hernia repair. The calculated dose of 0.3% bupivacaine for a caudal epidural would be approximately

(1) 5 (2) 13 (3) 15 (4) 20

(5) Question not attempted

