## **Anaesthesiology**

- 1) Which of the statement about the Na content of the following fluids is not true-:
- A) 0.9% NS has 154 mEq/L Na
- B) 0.45% NS has 77 mEq/L Na
- C) Lactated Ringers has 130 mEq/L Na
- D) Mannitol has 100 mEq/L Na
- 2) Carboxyhemogloblin conc. can decrease if smoking is stopped atleast for-:
- A) More than 6 weeks
- B) More than 4 weeks
- C) More than 12 hours
- D) More than 6 months
- 3) Ideal tidal Volume during lung isolation for pneumonectomy is-:
- A) 8-10 ml/kg
- B) 5-6 ml/kg
- C) 1-2 ml/kg
- D) 7-8 ml/kg
- 4) Right coronary artery gives rise to the post descending artery (Right dominant system) in
- A) 50% of the population
- B) 85% of the population
- C) Less than 10% of the population
- D) 1% of the population
- 5) Which of the following is least acceptable Inhalational agent for Induction in Children.
- A) Isoflurane
- B) Halothane
- C) Sevoflurane
- D) Desflurane
- 6) During Anaesthetic management of mitral stenosis patient -:
- 1) Avoid tachycardia (maintain sinus rhythm).
- 2) Avoid Hypovolaemia (adequate Instravascular volume should be maintained).
- 3) Systemic Vasodilatation should be preferred.
- 4) Avoid Hypercarbia.

## Select the correct answer using the codes given below -:

- A) 1, 2 ad 3
- B) 3 only
- C) 1 and 2
- D) 1, 2 and 4
- 7) Nor Epinephrine acts on -:
- A)  $_1$  receptors,  $_2$  >  $_1$  receptors
- B) <sub>1</sub> receptors, <sub>1</sub> > <sub>2</sub> receptors
- C) Only 1 receptors
- D) <sub>1</sub>& <sub>2</sub> receptors
- 8) The most important monitoring during laproscopic Cholecystectomy is -:
- A) Invasive B.P
- B) Temperature monitoring
- C) Capnography
- D) Neuromuscular monitoring

9) Stiff joint syndrome is important consideration for Anaesthetic management of a patient of -: A) Diabetes B) Thyroid C) COPD D) Liver Disease
10) Duration of analgesia with single dose neuraxial Fentanyl and Morphine is - A) Fentanyl - 2-4 hrs, Morphine - 6-24 hrs B) Fentanyl - 6-24 hrs, Morphine - 2-4 hrs C) Fentanyl - 1-2 hrs, Morphine - 10-22 hrs D) Fentanyl - 18-24 hrs, Morphine - 24-48 hrs
11) For Microcuff tracheal tube for children, which of the following statements are true -:
<ol> <li>There is less potential space for edema formation in the subglottic region</li> <li>More even pressure is applied to the mucosa &amp; the trachea.</li> <li>There is reduced risk for ventilator associated pneumonia.</li> <li>The cuff is located more proximally than standard tracheal tubes.</li> </ol>
Select the correct answer using the codes given below -:
A) 1, 2 and 4 B) 2 and 3 C) 1 and 4 D) 1, 2 and 3
<ul> <li>12) Absolute Contraindication for Extra Corporeal shock wave lithotripsy for urinary stones is -:</li> <li>A) Patients with pacemakers</li> <li>B) Orthopedic prosthesis</li> <li>C) Pregnancy</li> <li>D) Obesity</li> </ul>
13) All of these may increase Hepatic encephalopathy except -: A) Hypokalemia B) Propofol C) Benzodiazepines D) Systemic alkalemia
14) In Liver transplant surgery as the Reperfusion of the graft starts through Portal Vein, there is an increase in -:
1. Potassium 2. Hydrogen ion 3. SVR & B.P 4. Preload
Select the correct answer using the codes given below -:

A) 1 ,2 and 4 B) 2 ,3 and 4 C) 1 , 2 and 3 D) 3 Only

15) Which of the following are signs of bladder perforation during TURP -:
<ol> <li>Bradycardia</li> <li>Shoulder pain</li> <li>Diaphoresis</li> <li>Visual disturbances</li> </ol>
Select the correct answer using the codes given below -:
A) 1, 3 and 4 B) 2 and 3 C) 1, 2 and 3 D) 1 and 4
<ul> <li>16) During One lung ventilation, for encouraging the pulmonary blood flow the Ventilated lung should be kept -:</li> <li>A) More than FRC</li> <li>B) Less than FRC</li> <li>C) Initially more than FRC for 10 mts than lower than FRC</li> <li>D) At its normal FRC</li> </ul>
17) The majority of patients who desaturate during OLV (One lung ventilation), do so -: A) Within the first 10 minutes B) After 30 minutes C) After 1 hrs D) Within 2 minutes
18) The Extracorporeal Cardiopulmonary bypass activate -: A) Intrinsic coagulation pathway B) Extrinsic coagulation pathway C) Both Intrinsic & Extrinsic coagulation pathway and directly impairs platelet function D) Intrinsic & Extrinsic coagulation pathway but does not impairs platelet function directly
19) Sugammadex is a -: A) Muscle relaxant B) Cyclodextrin to antagonize effect of steroidal muscle relaxants C) Respiratory stimulant D) Reverses effect of Succinylcholine in resistant cases
20) In Depolarizing block, TOF (Train of four) ratio -: A) Is 100% B) Is 90% C) Is 80% D) Fades
21) The Chest Compression depth during CPR & the rate of Compression respectively should be -: A) At least 2-2.5 inches & 100-120/mt B) At least 1.5 inches & 90/mt C) At least 1 inches & 72/mt D) At least 3.5 inches & 120/mt
22) If during Adult Tachyarrhythmia with regular parrow ORS complexes, rate > 150/min, the dose of Adenosine & energy

- 22) If during Adult Tachyarrhythmia with regular narrow QRS complexes, rate >150/min, the dose of Adenosine & energy for cardio version is
- A) Adenosine first dose 6 mg, if required Second dose 12 mg, Cardio version with 120
- B) First dose adenosine 6 mg rapid IV push, if required Second dose 12 mg, Cardio version with 50
- C) Adenosine first dose 3 mg, if required Second dose 6 mg, Cardio version with 25
- D) Adenosine first dose 12 mg, if required Second dose 24 mg, Cardio version with 120
- 23) Which of the following is not a component of Child-Turcott-Pugh scoring system -:
- A) Albumim level
- B) Bilirubin level
- C) Potassium level
- D) Ascites

24) Which of the following are features of TURP syndrome -:
<ol> <li>Hyponatremia</li> <li>Hyposmolality</li> <li>Hypernatremia</li> <li>Hyperammonemia</li> </ol>
Select the correct answer using the codes given below -:
A) 1,3 and 4 B) 2 and 3 C) 2,3 and 4 D) 1,2 and 4
25) Volatile aneasthetic of Choice for Bariatric surgery is -: A) Desflurane B) Sevoflurane C) Isoflurane D) Halothane
26) In obese patients with BMI of more than 35kg/m², doses of which of the following drug should be determined on the basis of Ideal body weight -:  A) Succinylcholine  B) Midazolam  C) Vecuronium  D) Fentanyl
27) Which one of the following decreases in a pregnant patient -: A) Minute Ventilation B) Tidal Vol C) Resp. Rate D) FRC
28) During magnesium sulfate therapy for eclampsia, the goal is to achieve the level of magnesium in blood is in the range of -:  A) 1 - 1.5 mEq/L  B) 2 - 3.5 mEq/L  C) 3.5 - 4.5 mEq/l  D) 4.5 - 5 mEq/L
29) Glycosylated Hemoglobin(HbA1 <sub>c</sub> ) reflects mean blood glucose concentration over approximately -: A) 60 days B) 30 days C) 6 months D) 1 year
30) The most dangerous nerve injury after subtotal thyroidectomy is -: A) Injury to the abductor fibres & the recurrent larynageal nerves unilaterally B) Injury to the abductor fibres bilaterally C) Injury to adductor fibres unilaterally D) Injury to adductor fibres bilaterally
31) Which of the following is true about Pin index system -: A) Pins are 6 mm in diameter B) All pins are of same thickness C) Pins located on circle of 9/16 inch diameter D) Pins present on cylinder fits in hole in Yoke

32) Which of the following are features of Myasthenia gravis in a patient -: 1) There is weakness of legs more than arms 2) Exercise improves strength 3) There is poor response to anticholinesterase 4) There is extraocular, bulbar & facial muscle weakness Select the correct answer using the codes given below -: A) 1,2 and 3 B) 2,3 and 4 C) 4 only D) 1 and 2 33) Treatment strategies for increased Intracranial pressure in TBI (Traumatic brain injury) are all except -: A) Moderate head up position B) Osmo therapy C) Hypothermia D) Steroids 34) Elimination Half-life for Fentanyl is -: A) 3.1 - 6.6 hrs B) 1.7 - 3.3 hrsC) 1.4 - 1.5 hrsD) 0.17 - 0.33 hrs 35) Filling density is A) Ratio of weight of gas in cylinder to the weight of water that cylinder could hold B) Volume of cylinder occupied by liquid phase of gas C) Molecular density of cylinder material D) Ratio of liquid phase to gas phase in cylinder 36) For Neuraxial analgesia for labour pain, adequate analgesia is achieved during the first stage, if the blockade is up to -: A)  $T_{10}$  to  $L_1$ B)  $T_{10}$  to  $S_4$ C)  $L_1$  to  $S_4$ D)  $T_4$  to  $L_1$ 37) All of the following are present on permanent marking of cylinder, except -: A) Specification Number B) Service pressure at 70°F C) Name of Contained gas D) Manufacturer Name 38) What are the effects of intermittent back pressure on Vaporizer output -: A) Pumping effect decreases and pressurizing effect increases vaporizer output B) Both Pumping and Pressurizing effect increases vaporizer output C) No effect of back pressure on vaporizer output D) Pumping effect increases & pressurizing effect decreases vaporizer output 39) All of the following are positive predictions of survival after sudden cardiac arrest except -: A) Witnessed cardiac arrest B) Initiation of CPR by by-stander C) Initial rhythm of Ventricular Tachycardia (VT) or Ventricular Fibrillation D) Chronic diabetes mellitus 40) Most common type of Latex allergic reaction is -: A) Type III

B) Type IVC) Type IID) Type I

- 41) Vapour pressure of sevoflurane is -: A) 243 torr at 20°c B)  $669 \text{ torr at } 20^{\circ}\text{c}$ C) 157 torr at 20°c D) 278 torr at 20°c 42) Use of Rib guide in flow meter is -: A) Keep the indicator in center B) Does not allow ball indicator to rotate C) Prevent the indicator from plugging the outlet D) Provide calibration to flow meter tube 43) With ball indicator in flow meter reading is taken at -: A) Lower convex margin ball B) Upper margin of ball C) At slanted grooves D) Midpoint of ball 44) Phase IV in capnograph indicates -: A) Later part of inspiration B) Inhalation of Fresh gas C) Alveolar plateau D) Emptying of Alveoli 45) Rotameter flow meters calibrated at 1 ATA will indicate -: A) Falsely high values at increased ambient pressure (4 ATA) B) Falsely low values at increased ambient pressure (4 ATA) C) No change in values D) Will show no change in value till 4 ATA but will show false low values above 4 ATA 46) Decreased ETCO<sub>2</sub> is present in following conditions -: 1) Impaired Peripheral circulation 2) Increased Patient dead space 3) On Release of torniquet 4) Pulmonary embolus Select the correct answer using the codes given below -: A) 2, 3 and 4 B) 1, 2 and 3 C) 1, 2 and 4 D) 1 only 47) A Leak in gas sampling line produces on capnograph -: A) Biphasic expiratory plateau B) Irregular plateau C) Elevated baseline with normal waveform D) Long plateau with up swinging at phase III 48) Which of the following is not true about Neuro muscular monitoring -:
- A) Fade is present in Non depolarizing block
- B) Waveform is Biphasic
- C) Facial nerve should not be used to assess recovery from neuromuscular blockade
- D) In Double Burst Stimulation two burst of 50 Hz are separated by 750 ms
- 49) When longer version of Bains system is used in remote anaesthesia such as in MRI unit, following happens, except -:
- A) Reduction in PEEP
- B) Increase in static compliance
- C) Reduction in Peak inspiratory pressure
- D) Reduction in tidal volume with same ventilator settings

50) Hazards of fluid warming to the patient are -:
1) Infection 2) Hemolysis 3) Air embolism 4) False decrease in BIS
Select the correct answer using the codes given below -:
A) 1, 2and 4 B) 1, 3 and 4 C) 4 only D) 1, 2 and 3
51) Curare cleft is seen in -: A) Capnograph B) Plethysmograph C) Electro myograph D) Invasive blood pressure tracing
52) Most common dysrhythmia 2-5 days after cardiac surgery is-: A) Heart block B) Ventricular fibrillation C) Atrial fibrillation D) Ventricular ectopics
53) Deep Hypothermic circulatory Arrest involves reducing the patients core temperature to -: A) Less than 15°c B) 15°c - 22°c C) 22°c - 25°c D) 25°c - 28°c
54) Which of the following manifestations is not a feature of Diabetic Autonomic Neuropathy -: A) Resting Tachycardia B) Absent beat to beat variation in heart rate with deep breathing C) Orthostatic Hypotension D) Resting Bradycardia
55) Post operative Complications after correction of coarctation of aorta can be -:
1) Paradoxical Hypertension 2) Claudication 3) Paraplegia 4) Abdominal pain
Select the correct answer using the codes given below -:
A) 1,3 and 4 B) 2,3 and 4 C) 2 only D) 1 only
56) Hemodynamic compromise following protamine during cardiac surgery, if protamine reaction occurs is characterized by-:  A) In Pulmonary arterial pressure and in systemic pressure  B) In Pulmonary arterial pressure but no change in systemic pressure  C) No change in systemic arterial pressure but in Pulmonary arterial pressure  D) In Pulmonary arterial & systemic pressure

- 57) Airway Obstruction that occurs soon after tracheal extubation despite normal vocal cord function after thyroidectomy suggest the diagnosis of -:
- A) Paralysis of abductor fibres & Recurrent larygngeal nerve
- B) Tracheal compression by a hematoma
- C) Tracheomalacia
- D) Paralysis of adductor fibres & Recurrent larygngeal nerve
- 58) Which of the following does not fit in the criteria of precautions to be taken during a laser surgery -:
- A) Using water soaked sponges around the tube at the site of the work and at the glottis
- B) Cuff should be filled with saline
- C) Flexometallic tubes should be used
- D) Proper fitting tubes with no leak should be used
- 59) Modified Aldrete score is for assessing -:
- A) Patient to be fit for Ambulatory surgery
- B) Recovery after anaesthesia to transfer patient from phase 1 recovery unit
- C) Assessing difficult airway
- D) Patient to be fit for liver transplant
- 60) All of the following can be the effects of HBOT (Hyperberic oxygen therapy) on the eye except -:
- A) Narrowing of visual fields
- B) Change in the refractive index & the lens
- C) Myopia
- D) Conjuctivitis
- 61) In case of congenital diaphragmatic hernia surgery all are true except -:
- A) Positive- pressure Ventilation by mask should be avoided
- B) Preferably awake tracheal Intubation should be done
- C) After tracheal Intubation, positive airway pressure during mechanical Ventilation of the lung should not exceed 25-30 cm H<sub>2</sub>O
- D) After tracheal Intubation, positive airway pressure during mechanical Ventilation of the lung should exceed 30 cm H<sub>2</sub>O
- 62) In a Tracheo-oesophageal fistula repair surgery in a neonate, Endotracheal tube placement should be -:
- A) Above the carina but below the tracheo-esophageal fistula
- B) Below the carina in Right bronchus
- C) Below the carina in left bronchus
- D) Above the tracheo-esophageal fisule
- 63) The dose of Dantrolene for the Treatment of Malignant Hyperthermia is -:
- A) 5-6 mg/kg
- B) 2-3 mg/kg
- C) 8-10 mg/kg
- D) 10-12 mg/kg
- 64) The most important mechanism for the increase in alveolar-arterial gradient for oxygen observed in geriatric patient is due to -:
- A) Decrease in Total lung capacity
- B) Closing capacity increases more than FRC
- C) Decrease in Residual Volume
- D) Decrease in Vital Capacity
- 65) Which of the following can be used for pain relief after a cleft-lip -:
- A) Lesser palatine nerve block
- B) Greater palatine nerve block
- C) Nasopalatine nerve block
- D) Infraorbital nerve block

66) Goals for early Resuscitation in a Trauma patient are -: 1) Maintain systolic blood pressure of 80-100 mm Hg 2) Maintain Hematocrit of 25%- 30% 3) Maintain core temp lower than 35°c 4) Maintain PT <= 14 sec Select the correct answer using the codes given below Codes-: A) 1,2 and 4 B) 2,3 and 4 C) 1,2 and 3 D) 1 and 2 67) Gas cylinder used in MRI (Magnetic resonance imaging) set up is made up of -: A) Molybdenum B) Titanium C) Aluminium D) Armoured Steel 68) Liquid crystal is -: A) A Oxygen concentrator B) A Temperature monitor C) A Gas monitor D) Used in Pulse oxymetry 69) Disadvantages of Hypothermia are -: 1) Inhibits Platelet function 2) Increased symphathetic activity 3) Hypervolumia 4) Delayed recovery

## Select the correct answer using the codes given below -:

- A) 1,2 and 4
- B) 2,3 and 4
- C) 1 and 3
- D) 4 only
- 70) What among these is used in Plasma sterilizer -:
- A) Temperature more than 60°c
- B) Moist environment
- C) radiation
- D) Hydrogen peroxide
- 71) Which of the following statement is true about Heat moisture exchange (HME) filter -:
- A) Hydrophobic Heat Moisture Exchange filter is more efficient in Temperature & moisture conservation than Hygroscopic filter
- B) Hygroscopic HME filter is better bacterial and viral filter
- C) Hygroscopic HME filter is more resistant in wet condition
- D) Hydrophobic HME performance does not impair by high ambient temperature
- 72) Most common location of Reservoir bag in classic circle system is -:
- A) Just upstream to inspiratory unidirectional valve
- B) Between inspiratory unidirectional valve and absorber
- C) Between expiratory unidirectional valve and absorber
- D) Between inspiratory unidirectional valve and Y-Piece

73) Most frequently reported malfunction in medical gas pipeline system -: A) Cross Connection B) Excessive pressure C) Alarm Dysfunction D) Inadequate pressure
74) Mixed venous oxygen saturation increases in -: A) Anaemia B) Sepsis C) Seizures D) Low Cardiac output
<ul> <li>75) Increase in Airflow resistance of patient ventilator system display on waveform as -:</li> <li>A) Shifting of P – V slope &amp; loop towards pressure axis</li> <li>B) Bowing of P – V loop</li> <li>C) Shifting of P – V slope &amp; loop towards volume axis</li> <li>D) Increase in Plateau pressure</li> </ul>
76) Ventilatory mode with continuous Positive airway pressure at two distinct pressure level is known as -: A) Pressure support ventilation B) Pressure control ventilation C) Pressure regulated volume control D) Airway pressure release ventilation
77) When a ventilator delivers a mechanical breath in response to patients effort it is called -: A) Time triggered B) Pressure or Flow triggered C) Volume triggered D) Intermittent breath
78) EPAP (Expiratory Peak airway Pressure) & IPAP (Inspiratory Peak airway pressure) in initial Non invasive ventilation setting are -:  A) 2 and 6 cm H <sub>2</sub> O respectively  B) 5 and 10 cm H <sub>2</sub> O respectively  C) 4 and 8 cm H <sub>2</sub> O respectively  D) 3 and 8 cm H <sub>2</sub> O respectively
79) IRV(Inverse ratio ventilation) reduces intrapulmonary shunting & improvement in oxygenation by -: A) Increase in Peak inspiratory pressure B) Increase in Dead space ventilation & Auto PEEP C) Increase in Mean airway pressure & Auto PEEP D) Increase in Peak expiratory pressure
80) Strategies in Refractory ARDS are -:
<ol> <li>Plateau pressure more than 35 cm H<sub>2</sub>O</li> <li>Prone position ventilation</li> <li>Permissive Hypercapnia</li> <li>High PEEP with low tidal volume</li> </ol>
Select the correct answer using the codes given below -:
A) 2, 3 and 4 B) 1,3 and 4 C) 1, 2 and 4 D) 1 only
81) PaO <sub>2</sub> / FiO <sub>2</sub> ratio of less than or equal to 200 mm Hg is characteristic of -: A) VAP B) ARDS C) ALI D) Hypoxic ischemic encephalopathy

82) Which of the following statement is true regarding pulse oximetry -: A) Reflectance oximetry relies on light that is back scattered B) Oxyhemoglobin absorbs more light in red band of light C) Fractional oxygen saturation is ratio of oxyhemoglobin to all functional Hemoglobin species D) Reduced Hemoglobin absorb more light in infrared band 83) Decrease in PaCO<sub>2</sub> causes all except -: A) Decrease cerebral Metabolism B) Decrease cerebral blood flow C) Cerebral vasoconstriction D) Increase in cerebral tissue Lactate concentration 84) Which of the following occurs in venous air embolism -: 1) Increase in ETCO<sub>2</sub> 2) Mill wheel murmur 3) PA catheter can recognize Paradoxical VAE 4) CVC in SVC can aspirate more air than in right atrium Select the correct answer using the codes given below -: A) 1, 2 and 3 B) 2, 3 and 4 C) 3 only D) 1 and 2 85) Oxygen flush -: A) Generates flow rate 35 to 75 lit/min B) Gets supply from flow water C) Self opening device D) Low pressure system 86) Vital capacity equals to -: A) IRV B) IRV + TV + ERV C) IRV + ERV D) IRV + TV 87) Pressure on the globe or any orbital contents can result in oculocardiac reflex with all the signs mentioned below except -: A) Bradycardia B) Laryngospasm C) Atro ventricular Block D) Asystole 88) Which of the following is not a modality for assessment of systemic Perfusion -: A) Urine Output B) Lactate clearance C) Mixed Venous Oxygenation D) End tidal CO<sub>2</sub> 89) D-Dimer level increases in all of the following except -: A) End stage liver failure B) DIC C) Hyperfibrinolysis D) Thrombocytopenic Purpura 90) All of these are agonist-antagonist Opioid compound except -:

A) MepridineB) PantazocineC) ButorphanolD) Buprenorphine

91) The features of propofol infusion syndrome are -:
1) Refractory bradycardia 2) Metabolic acidosis 3) Hyperlipidemia 4) Metabolic alkalosis
Select the correct answer using the codes given below -:
A) 4 only B) 1 and 3 only C) 2 only D) 1, 2 and 3
92) Etomidate is -: A) Phenol derivative B) Imidazole derivative C) Amide derivative D) Phenolyedine derivative
93) All of following are vitamin K dependent protein except -: A) Factor VII B) Factor IX C) Protein C and S D) Factor III
94) Potency of a drug describes -: A) Effectiveness once it occupies receptors B) Amount of drug required to elicit its effects C) Concentration range in which drug effect occurs D) Lethal dose of a drug
95) Which of the following is not a method of sleep evaluation -:
1) Actigraphy 2) Polysomnography 3) Plethysmography 4) Polygraphy
Select the correct answer using the codes given below -:
A) 1 and 3 B) 2 and 4 C) 3 only D) 1, 2 and 4
96) Which is the most common nerve injury following spinal anaesthesia -: A) Lumbosacral nerve root or cord B) Spinal cord injury C) Sciatic nerve injury D) Femoral nerve injury
97) All of the following are absolute contraindication to neuraxial block except -:  A) Patients inability to maintain stillness during needle puncture  B) Raised intracranial pressure  C) Spina bifida  D) Patient refusal

- 98) Complication of Intercostal nerve block is -:
- 1) Pneumothorax
- 2) Horner syndrome
- 3) Phernic nerve block
- 4) Plural Effusion

## Select the correct answer using the codes given below -:

- A) 2 and 3
- B) 1 only
- C) 1 and 3
- D) 2, 3 and 4
- 99) Osmolarity of ringer lactate is -:
- A) 273 mOsm/L
- B) 308 mOsm/L
- C) 250 mOsm/L
- D) 295 mOsm/L
- 100) Which of the following change occurs in Properties of whole blood after 35 day storage in CPDA-1
- A) pH increases
- B) Plasma K<sup>+</sup> decreases
- C) Plasma Hemoglobin increases
- D) Plasma Na<sup>+</sup> decreases