

AZY

PROVISIONAL ANSWER KEY (CBRT)

Name of the post	Assistant Professor, Cardio Vascular & Thoracic Surgery, GSS, Class-1
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Instructions / સૂચન

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

- (1) All the suggestion should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical submission of suggestions will not be considered.
- (2) Question wise suggestion to be submitted in the prescribed format (proforma) published on the website / online objection submission system.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website / online objection submission system. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.
- (4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed.
- (6) Objection for each question should be made on separate sheet. Objection for more than one question in single sheet shall not be considered.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

- (1) ઉમેદવારે વાંધા-સૂચનો ફક્ત ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ અથવા ટપાલ દ્વારા આયોગની કચેરીએ મોકલવા આવેલ વાંધા-સૂચનો ધ્યાને લેવામા આવશે નહીં જેની ખાસ નોંધ લેવી.
- (2) ઉમેદવારે વાંધા-સૂચનો રજૂ કરવા વેબસાઇટ / ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ પર પ્રસિધ્ધ થયેલ નિયત નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ કરતા તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચનો ધ્યાનમા લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચનો પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

Website link for online objection submission system : www.safevaults.in/login

001. Isolated Right ventricular dysfunction is manifested by all except -
 (A) High CVP (B) Variable P.A. pressure
 (C) Hypervolemic L.V. (D) Low Cardiac output
002. In an electrocardiogram, right axis deviation is found in -
 (A) Ostium Primum A.S.D. (B) Common Atrium
 (C) A-V Canal defect (D) Sinus venosus A.S.D.
003. Causes of wide and fixed split S₂ are all except -
 (A) A.S.D. (B) P.A.P.V.C.
 (C) Massive acute pulmonary embolism (D) V.S.D.
004. Migratory arthritis is suggestive of all except -
 (A) Rheumatic fever (B) Whipple's disease
 (C) S.L.E. (D) Still's disease
005. Which of the following drugs does not cause postural hypotension in cardiac patients -
 (A) Diuretics (B) Calcium channel blockers
 (C) Nitrates (D) B-blockers
006. The commonest cyanotic heart disease at birth is -
 (A) D-TGA (B) Tricuspid atresia
 (C) Transposition of the large arteries (D) T.O.F.
007. Which of the following is not correlated to 3rd heart sound (S₃) -
 (A) L.V.E.D.P. >25 mmHg
 (B) Rapid Y descent in J.V.P.
 (C) Systolic dysfunction (40%)
 (D) Tall a wave compared to e wave in Doppler study across A-V valve.
008. In a patient of I.E., cause of absence of fever -
 (A) C.H.F. (B) Elderly patient
 (C) Fungal endocarditis (D) All of the above
009. Cardiac cath was first attempted by -
 (A) Philip Bozzini (B) Gustav Killian
 (C) Julius Brunk (D) Warner Frossman
010. Which of the following is not an E.C.G. feature of T.O.F. patients -
 (A) Prolonged P.R. interval (B) R.B.B.B.
 (C) Early transition of R wave (D) R.V.H.
011. Which of the following is not a continuous flow ventricular assist device
 (A) Heart Mate II (B) Thoratec
 (C) Jarvik 2000 (D) Dura Heart
012. Which is not a total artificial heart -
 (A) Syncardia (B) AbioCor
 (C) Cardio west (D) Heart wave

013. Which muscle is used in the treatment of D.C.M.P. as dynamic cardiomyopathy -
 (A) Latissimus dorsi (B) Rectoralis major
 (C) Serratus anterior (D) Rectus abdominus
014. Which is not an acceptable hemodynamic variable for V.A.D. consideration -
 (A) Cardiac index $< 2 \text{ L/m}^2$
 (B) Systolic B.P. $< 80 \text{ mm Hg}$
 (C) Pulmonary capillary wedge pressure $> 20 \text{ mmHG}$
 (D) Patient on minimal inotropic support
015. Which is not an absolute contraindication for recipient to heart transplantation -
 (A) P.V.R. $> 3\text{-}4$ wood units despite maximal therapy
 (B) Creatine clearance $< 50 \text{ mg/ml/min}$
 (C) Bilirubin $> 3 \text{ mg/dl}$
 (D) Age > 65 yrs
016. Which is not an Antiproliferative agent used in heart transplant patient for maintenance of immunosuppression -
 (A) Mycophenolate mofetil (B) Sirolimus
 (C) Azathioprine (D) Cyclosporin
017. The classical triad of post-traumatic cardiac tamponade consists of -
 (A) Low B.P., Low C.V.P., faint heart sounds
 (B) High B.P., Low C.V.P., faint heart sounds
 (C) Low B.P., high C.V.P., faint heart sounds
 (D) High B.P., high C.V.P., faint heart sounds
018. Who give first suggestion that heart wound could be sutured -
 (A) Roberts (B) Rehn
 (C) Williams (D) Hill
019. Indication for ECMO for respiratory failure are all except -
 (A) ARDS
 (B) Pneumonia
 (C) Primary graft failure following lung transplantation
 (D) Multiple organ failure
020. Absolute contraindication for ECMO are all except -
 (A) Age > 65 years (B) Recoverable Cardiac disease
 (C) Nonrecoverable Cardiac disease (D) Nonrecoverable respiratory disease
021. Indication of Flexible bronchoscopy are all except -
 (A) Ca Lung (B) Foreign body removal
 (C) Leser ablation (D) Haemoptysis due to coagulopathy

022. For Lung resection surgeries, which parameter is most important in spirometry -
 (A) FEV (B) TLC
 (C) FVC (D) FRC
023. The first extraction of Airway F.B. was performed by -
 (A) Gustab Kirklin (B) Darrow & Holinger
 (C) Chevalir Jackson (D) Hughes & Collegues
024. Triangle of Koch's is bounded by all except -
 (A) Septal triaspid leaflet (B) Coronary sinus
 (C) Tendor of todaro (D) IVC
025. Dose of heparin for Cardiopulmonary bypass is -
 (A) 1 - 2 mg/kg (B) 4 - 6 mg/kg
 (C) 3 - 4 mg/kg (D) 6 - 8 mg/kg
026. Which is incorrect regarding P.H. strategy of C.P.B. -
 (A) Good for paediatric patients
 (B) Results in increased cerebral blood flow
 (C) Results in respiratory acidosis and hypercarbia
 (D) Good for adult patients
027. How much ACT is required to run C.P.B. -
 (A) 200 - 250 sec. (B) 350 - 400 sec.
 (C) 300 - 350 sec. (D) 450 - 500 sec.
028. In Heparin resistance (Antithromdin III deficiency), these can be used except -
 (A) Kaolin (B) Biralirudin
 (C) Increased dose of heparin (D) Hirudin
029. To minimise cerbral injury in D.H.C.A., retrograde cerebral perfusion is used at a pressure not more than -
 (A) 20 mm Hg (B) 60 mm Hg
 (C) 40 mm Hg (D) 80 mm Hg
030. Right fibrous trigone is in close relationship with the following except -
 (A) Mitral and triaspid annuli (B) Membranous septum
 (C) Noncoronary cusp (D) Left coronary cusp
031. L.V. end-diastolic volume is -
 (A) 40 - 50 ml/m² (B) 60 - 70 ml/m²
 (C) 50 - 60 ml/m² (D) 70 - 80 ml/m²
032. Which of the following is not used in pulmonary hypertensive crisis -
 (A) Phosphodiesterase inhibitor (B) Endothelial receptor antagonist
 (C) Nitric oxide inhalation (D) Nitrous oxide inhalation

033. L.M.W.H. is monitored with -
 (A) P.T. / INR (B) Antifactor Xa
 (C) aPTT (D) Antifactor IVa
034. Early prosthetic valve endocarditis is within _____ days of surgery -
 (A) 30 days (B) 90 days
 (C) 60 days (D) 120 days
035. Maximum concentration of KCL that can be administered peripherally is -
 (A) 40 meq/L (B) 80 meq/L
 (C) 60 meq/L (D) 100 meq/L
036. Following rhythm changes can be seen in Digoxin toxicity except -
 (A) P.V.Cs. (B) Non paroxysmal AV junctional tachycardia
 (C) A - V block (D) Sinus tachycardia
037. What should be the target INR in followup patients of Biological MVR -
 (A) 1.5 - 2.0 (B) 2.5 - 3.0
 (C) 2.0 - 2.5 (D) 3.0 - 3.5
038. Kussamaul's sign present in -
 (A) Cardiac tamponade (B) Constrictive Pericarditis
 (C) Restrictive Cardiomyopathy (D) All of the above
039. Square root sign in cath study is found in -
 (A) Constrictive Pericarditis (B) Cardiac tamponade
 (C) Restrictive Cardiomyopathy (D) All of the above
040. Pericardial cysts are commonly found in -
 (A) Right Costophrenic angle (B) Hilum
 (C) Left Costophrenic angle (D) Apex
041. Gold standard diagnostic modality for atherosclerotic carotid disease is -
 (A) Doppler USG (B) M.R.I.
 (C) D.S.A. (D) C.T. Angiogram
042. Following are the anatomic high risk criteria for Carotid endarterectomy expect -
 (A) Lesions at C2 or higher (B) Lesions below carotid
 (C) Contralateral laryngeal nerve palsy (D) Ipsilateral laryngeal nerve palsy
043. Which one of the following is nonretrievable IVC filter -
 (A) Stainless steel Greenfield filter (B) Titanium Greenfield filter
 (C) Tech (D) Gantner Tulip filter
044. When the superficial vein thrombosis in G.S.V. extends to within _____ cm of the saphenofemoral junction; treat as D.V.T. -
 (A) 2 cm (B) 6 cm
 (C) 4 cm (D) 8 cm

045. Duration of treatment of anticoagulation for superficial venous thrombosis -
 (A) 2 weeks (B) 6 weeks
 (C) 4 weeks (D) 8 weeks
046. Vitamin K antagonist affect following procoagulant factors -
 (A) Factor II (B) Factor IX
 (C) Factor VII (D) Protein S & Protein C
047. Which of the following drug does not inhibit the effect of oral anticoagulants -
 (A) Rifampicin (B) Phenytoin
 (C) Multivitamins (D) Omqerazole
048. Paget-schroeffler syndrome is -
 (A) Thrombosis of the subclavian vein
 (B) Thrombosis of the subclavian artery
 (C) Thrombosis of the subclavian Axillary vein
 (D) Thrombosis of the subclavian Axillary artery
049. S.V.C. syndrome is most commonly by -
 (A) Malignant tumer compression (B) Fibrosing mediastinitis
 (C) Infectious disease masses (D) Iatrogenic causes secondary to catheters
050. Vascular sling is defined as -
 (A) L.P.A. arises from the R.P.A. extrapericardially and courses to left side behind trachea and in front of oesophagus.
 (B) R.P.A. arises from L.P.A. extrapericardially and courses to right side beind trachea and in front of oesophagus.
 (C) Tracheal compression by brachiocephalic or left common carotid artery
 (D) Ductus arteriosus sling
051. In pneumothorax due to blund injury, treatment of choice is -
 (A) Observation (B) Pneumonectomy
 (C) Thoractomy (D) Intercostal drinage
052. Intrapleural pressure grater than atmospheric pressure is diagnostic of -
 (A) Valvular pneumothorax (B) Closed pneumothorax
 (C) Open pneumothorax (D) All of the above
053. Indication of thoracotomy in haemothorax is -
 (A) Initial chest drain output > 1.5 L
 (B) More than 250 ml/hr drain for 3 consecutive hours
 (C) Opacified chest Xray
 (D) All of the above

054. Which is incorrect regarding flail chest -
 (A) Defined as fracture of ≥ 4 ribs unilateral or bilateral
 (B) It results in paradoxical motion locally
 (C) Ventilation with IPPV is the treatment of choice
 (D) Operative fixation of flail chest segments not recommended
055. Which of the following is not in indication for operative intervention for pneumothorax -
 (A) Spontaneous pneumothorax
 (B) Recurrent pneumothorax
 (C) 1st episode of pneumothorax in pt. of prior pneumonectomy
 (D) Persistent air leak
056. Diagnostic considerations for thoracic outlet syndrome include -
 (A) History & physical examination (B) Radiograph of chest and cervical spine
 (C) Electromyography & N.C.V. (D) All of the above
057. Diaphragm is innervated by -
 (A) C_{1, 2, 3} (B) T_{1, 2, 3}
 (C) C_{3, 4, 5} (D) T_{3, 4, 5}
058. Which of the following is not a complication of surgery for thoracic outlet syndrome -
 (A) Pneumothorax (B) Lymphocutaneous fistula
 (C) Brachial plexus injury (D) Long thoracic nerve injury
059. Indication of surgery in pulmonary tuberculosis -
 (A) Suspicion of malignancy (B) Cavitory lesion with aspergilloma
 (C) Massive Haemoptysis (D) All of the above
060. The most common benign tumor of lung is -
 (A) Hamartoma (B) Teratoma
 (C) Alveolar adenoma (D) Fibroma
061. Commonest nerve involved in Pancoast tumor is -
 (A) C₂ - 6 (B) C₇ - T₁
 (C) T₂ - 5 (D) T₅ - 9
062. The greatest (highest) incidence of B.P.F. is following -
 (A) Segmental resection (B) Pneumonectomy
 (C) Lobectomy (D) Thoractomy
063. Investigation of choice in pulmonary embolism is -
 (A) V-P scan (B) C.E.C.T.
 (C) M.R.I. (D) X-ray
064. True regarding Transudate pleural effusion -
 (A) More than 220 U/L lactate dehydrogenase
 (B) More than 0.5 gm/100ml ratio of pleural and serum proteins
 (C) Less than 0.6 ratio of pleural / serum lactate dehydrogenase
 (D) Specific gravity below 1.015

065. Chronic Lung disease is called severe in case of -
 (A) FEV, > 75% of predicted value (B) FEV, 60 - 75% of predicted value
 (C) FEV, 50 - 59% of predicted value (D) FEV, <50% of predicted value
066. Chamberline procedure is known as -
 (A) anterior mediastenostomy (B) Posterior mediastenostomy
 (C) Cervical mediastenostomy (D) Middle mediastenostomy
067. The most common carcinoma of upper 1/3rd trachea is -
 (A) Squamous cell carcinoma (B) Adenoid cystic carcinoma
 (C) Fibrosarcoma (D) Small cell carcinoma
068. In correct posture, commonest site of foreign body in bronchus
 (A) Right post. basal (B) Right ant. basal
 (C) Rt. lateral basal (D) Rt. medial basal
069. The most common cause of primary spontaneous pneumothorax -
 (A) Repture of apical subpleural bleb (B) Rupture of bulla
 (C) Spontaneous repture of oesophagus (D) Asthma
070. In chylothorax, pleural fluid triglyceride level are usually -
 (A) > 30 mg/dl (B) > 50 mg/dl
 (C) > 80 mg/dl (D) > 110 mg/dl
071. Which muscle is not used as a muscle flap closure of post pneumonectomy empyema space-
 (A) Pectoralis major (B) Serratus anterior
 (C) Lattismus dorsi (D) Trapezius
072. IVC passes through the diaphragm at the level of -
 (A) T₆ (B) T₁₀
 (C) T₈ (D) T₁₂
073. Diaphragm pacing is indicated in all except -
 (A) Central alveolar hypoventilation (B) High cervicle spinal cord injury
 (C) End state C.O.P.D. (D) L.B.B.B.
074. A prolonged air leak is defined as one that lasts longer than _____ days postoperationely-
 (A) 7 days (B) 5 days
 (C) 3 days (D) 10 days
075. Which of the following incision is given for diaphragmatic surgery -
 (A) Transverse (B) Circumferantial
 (C) Verticle (D) All of the above
076. Dysphagia lusoria is caused by -
 (A) Abnormal clongation of arch of aorta (B) Aneurysmal arch of aorta
 (C) Esophageal web (D) Esophageal diverticula

077. Contraindication of Decirtucatuib in Emyyema are all except -
 (A) Major bronchial obstruction (B) Pulmonary Destruction
 (C) Uncotrolled repsis (D) Fibrothorax
078. In which of the following procedure, chylothorax does not occurs -
 (A) P.D.A. surgery (B) Thoracic aorta aneyrysm surgery
 (C) C.O.A. surgery (D) Pericardiectomy
079. Dose of Urokinase for intrapleural fibrinolysis in the treatment of empyema patients -
 (A) 100000 units in 100 ml saline (B) 500000 units in 100 ml saline
 (C) 1000000 units in 100 ml saline (D) 1500000 units in 100 ml saline
080. Which is used for chemical pleurodesis -
 (A) Bleomycin (B) Doxycycline
 (C) Teracycline (D) all of the above
081. Which one of the following is not an extraanatomic bypass grafting -
 (A) Aertofemoral bypass (B) Axillofemoral bypass
 (C) Femoro-femoral bypass (D) Thoracofemoral bypass
082. Choice of conduit for infra inguinal bypass -
 (A) G.S.V. (B) P.T.F.E.
 (C) Dacron (D) Lener saphenous vein
083. Dacron prosthetic graft have tendency to dilate _____ % when subject to arterial pressure-
 (A) <10% (B) 10 - 20%
 (C) 20 - 30% (D) 30 - 40%
084. C.L.I. is defined as -
 (A) Persistant ischemic rest pain for 2 weeks
 (B) Ankle systolic pressure >50 mm Hg.
 (C) Ulceration & gangrene of the foot or toes
 (D) All of the above
085. Which medical therapy is not useful for patient with claudication -
 (A) Pentoxyphylline (B) Cilastazole
 (C) Xanthine Nicotinate (D) B-blockers
086. Caludication occurs at _____ ankle-brachial index -
 (A) 0.40 - 0.80 (B) 0.20 - 0.40
 (C) Less than 0.20 (D) More than 0.80
087. The most frequent site for embolic occlu -
 (A) Cerebro vascular circulation (B) Visceral venels
 (C) Upper extremities venals (D) Lower extremities venals
088. Chronic critical limb ischemia is defined when C.L.I. symptoms persist beyond -
 (A) 7 days (B) 14 days
 (C) 21 days (D) 28 days

089. The most common cause of abdominal aortic aneurysm is -
 (A) Atherosclerosis (B) Syphilis
 (C) Trauma (D) Vasculitis
090. Most common site of rupture of abdominal aortic aneurysm is -
 (A) Laterally into the left retroperitoneum
 (B) Laterally into the right retroperitoneum
 (C) Posteriorly into the posterior retroperitoneum
 (D) Anteriorly into the peritoneum
091. Who invented the ingenious well technique for A.S.D. repair in 1950s -
 (A) Lewis and Taufic (B) Gross
 (C) Gibbon (D) Kind and Mills
092. Left axis deviation and a counterclockwise loop in ECG strongly supportive of -
 (A) Fossa ovalis type ASD (B) Sinus venosus type ASD
 (C) Coronary sinus ASD (D) Ostium primum ASD
093. The clamshell device is used to close the A.S.D. with defect size upto -
 (A) 10 mm (B) 30 mm
 (C) 20 mm (D) 40 mm
094. Pericardium is not the material of choice for interatrial patch -
 (A) When a regurgitant jet may strike the patch
 (B) When pericardium forms part of the wall of an intracardiac conduit
 (C) When the patch is sewn to a very delicate area
 (D) When surgery is done in early aged patients
095. The contraindication for the operation of A.S.D. -
 (A) Very young or very old age
 (B) Pulmonary vascular resistance 8 - 12 wood units/ m^2 at rest
 (C) $Q_p : Q_s > 1.8$
 (D) Scimitar syndrome with severe hypoplasia of right lung
096. Warden operation is done for -
 (A) Sinus venosus ASD (B) A-V canal defect
 (C) Coarctation of aorta (D) D.O.L.V.
097. The most common type of T.A.P.V.C.
 (A) Supracardiac (B) Infracardiac
 (C) Cardiac (D) Mixed
098. Snowman configuration on chest radiography is diagnostic of -
 (A) T.A.P.V.C. (B) T.G.A.
 (C) Triuspid atresia (D) Transarteriosus

099. Typically the proximal (common pulmonary venous) chamber is _____ than the distal (left atrial) chamber -
- (A) Larger (B) Smaller
(C) Equal (D) Variable
100. Rastelli's clarification is used for -
- (A) Endocardial cushion defect (B) T.A.P.V.C.
(C) Interrupted aortic arch (D) Ebstein's anomaly
101. Surgical treatment of AV septal defects is directed towards -
- (A) Maintaining or creating two competent AV valves
(B) Avoiding damage to the AV node or bundle of its.
(C) Closing the interatrial and interventricular defects both
(D) All of the above
102. What is false regarding unbalanced atrioventricular septal defect -
- (A) It is about 10% of patients with A.V. septal defects
(B) Appx. 1/3rd of right ventricular dominance patients have down syndrome
(C) Left dominant unbalanced complete AV septal defect < 0.5
(D) Ratio of Left AV valve area to the total AV valve area 0.4 or less indicated left ventricular dominance.
103. Posterior malalignment V.S.D. are found in -
- (A) T.O.F. (B) T.G.A.
(C) Toussing-Bing anomaly (D) Interrupted aortic arc
104. Large V.S.D.s are characterized by all except -
- (A) Size of aortic orifice or larger
(B) V.S.D. resistance index greater than 20 units / m²
(C) Op : Qs > 2.0
(D) Increased R.V. systolic pressure
105. Heath Edward classification is used in -
- (A) V.S.D. (B) Pulmonary vascular disease
(C) A.V. canal defect (D) Interrupted aortic arch
106. Which type of V.S.D.s are more likely to close -
- (A) Juxta aortic (B) Inlet V.S.D.
(C) Juxta tricuspid (D) Perimembranous
107. About _____ % of patients with large V.S.Ds seen at age of 1 month experience eventual spontaneous closure -
- (A) 80% (B) 60%
(C) 50% (D) 25%
108. If the pulmonary banding is done for a complex cardiac anomaly with mixed circulation, the length of 3-4 mm wide tape is _____ mm plus the child's weight.
- (A) 16 mm (B) 20 mm
(C) 24 mm (D) 28 mm

109. Congenital sinus of valsalva aneurysm is most common
 (A) Right aortic sinus (B) Left aortic sinus
 (C) Noncoronary sinus (D) All are equal
110. Most prevalent site for R.S.O.V. is -
 (A) Right atrium (B) Right ventricle
 (C) Left atrium (D) Left ventricle
111. The first successful catheter closure of P.D.A. was performed by -
 (A) Gross (B) Raskkind
 (C) Touroff (D) Gibson
112. Which of the following is incorrect regarding P.D.A. -
 (A) Postnatal closure usually begins at the pulmonary end.
 (B) Ductus arteriosus is completely closed by 8 weeks in 88%
 (C) Functional closure is complete within 10 - 15 hrs after birth
 (D) Ductus is more sensitive to PO_2 in immature and to PGE_1 in mature fetus.
113. Closure of P.D.A. is done on C.P.B. in all except -
 (A) Calcified P.D.A. (B) Very short ductus
 (C) Associated intracardiac repair of lesions (D) Premature Infants
114. The sudden appearance of a continuous murmur at parasternal region in a previously healthy young man suggestive of -
 (A) R.S.O.V. (B) M.R.
 (C) V.S.D. (D) P.D.A.
115. Consistent features of Tricuspid atreria are all except -
 (A) Hypoplasia of the morphologic R.V.
 (B) An interatrial communication
 (C) A morphologic L.V. equipped with a morphologic mitral valve
 (D) An interventricular communication
116. Incorrect regarding T.G.A.
 (A) Males outnumber females by a ratio of 4 : 1
 (B) Seldom occurs in first-born infants
 (C) Cyanosis present in the neonatal period
 (D) Common in premature child
117. The coronary artery anomalies in Fallot's tetralogy includes all except -
 (A) A canal artery arises by a separate ostium from the right aortic sinus and passes anterior to R.V.O.T.
 (B) L.A.D. arises by a separate ostium from right aortic sinus and passes anterior to R.V.O.T.
 (C) The anterior descending (A.D.) branch of a niple
 (D) The incidence is less than 5% in T.O.F. patients.

118. Pulmonary blood flow increases _____ fold at birth -
 (A) 4 - 6 folds (B) 6 - 8 folds
 (C) 8 - 10 folds (D) 10 - 12 folds
119. Incorrect regarding CC TGA -
 (A) Ventriculoarterial discordant
 (B) Atrioventricular discordant
 (C) Ventriculoarterial & atrioventricular discordant
 (D) Ventriculoarterial & atrioventricular concordant
120. Major cardiac malposition are all except -
 (A) Visceroatrial situs inversus with dextrocardia
 (B) Visceroatrial situs solitus with dextrocardia
 (C) Visceroatrial situs inversus with Levocardia
 (D) Visceroatrial situs inversus with Levocardia
121. Recurrent coarctation is defined as the resting peak pressure gradient exceeding _____ mm Hg. across the repair area -
 (A) 10 mm Hg. (B) 20 mm Hg.
 (C) 30 mm Hg. (D) 40 mm Hg.
122. Subclavian patch aortoplasty was popularized for coarctation of aorta by -
 (A) Crafoord & Nylin (B) Waldhausen & Nahrwold
 (C) Lynx & Kirklin (D) Gross & Morris
123. The most frequent clinical manifestation of Chronic R.H.D. -
 (A) Rheumatic M.S. (B) Rheumatic M.R.
 (C) Rheumatic A.S. (D) Rheumatic A.R.
124. Which one of the following is not a major Jones's criteria -
 (A) Carditis (B) Polyarthritides
 (C) Chorea (D) Arthralgias
125. False regarding Ischemic M.R. -
 (A) The posterior papillary muscle has a simple blood supply from P.D.A.
 (B) The anterior papillary muscle has dual blood supply
 (C) Mechanism of ischemic M.R. includes papillary muscle dysfunction or mitral annular dilatation or both
 (D) It is seen in variable severity in less than 10% of C.A.D. patients considered for C.A.B.G.
126. All of the following are true regarding R.F. except -
 (A) Rheumatic carditis is a pancarditis
 (B) Arthritis occurs in more than 2/3rd of patients.
 (C) Joint involvement is common in younger patients.
 (D) Large joints of extremity are usually involved.

127. M-mode eco findings in M.S. are all except -
 (A) Decreased E-F slope
 (B) Increased E-F slope
 (C) anterior motion of posterior leaflets in early diastole
 (D) Enlarged L.A.
128. Quantitative assessment of severe MR is -
 (A) Regurgitant valume ≥ 60 ml
 (B) Regurgitant valume $\geq 50\%$
 (C) E.R.O. ≥ 40 mm²
 (D) All of the above
129. Popillary muscle rupture from M.I. occurs usually on -
 (A) 1st day
 (B) 2nd - 5th day
 (C) 2nd week
 (D) 3rd week
130. Medical management of H.O.C.M. includes all except -
 (A) B-blockers
 (B) Calcium channel blockers
 (C) Disopyramide
 (D) B-agonists
131. Surgical Mx of HOCM includes all except -
 (A) Single chamber pacing (V.V.I.)
 (B) Alcohol induced reptal necrosis
 (C) Marro procedure
 (D) Left Ventricular myectomy & myotomy
132. Oral anticoagulants affects following coapulation factors except -
 (A) Factor II
 (B) Factor IX and X
 (C) Protene C and Protein S
 (D) Factor IV and V
133. Biological heart valves are indicated in -
 (A) Elderly patients
 (B) Patients with C/I to anticoapulation
 (C) Child bearing aged female
 (D) All of the above
134. Papaverine is -
 (A) Na⁺ - K⁺ pump inhibitor
 (B) Potassium channel opener
 (C) Phosphodiesterase inhibitor
 (D) A membrance stabilizing apent
135. Clasical B.T. shunt is usually done on -
 (A) Side opposite to aortic arch
 (B) Same sides as of aortic arch
 (C) Side of shunt is not decided according to aortic arch
 (D) Always on right subclavian artery
136. P.A. Banding was first done by -
 (A) Lewis & Tauffic
 (B) Muller & Dammann
 (C) Waltan Lilehei
 (D) Trusler
137. Richardson classification is used for classification of -
 (A) A.P. Window
 (B) D.O.R.V.
 (C) Interrupted aortic arch
 (D) Triuspid Atreia

138. ECG features of Ebstein's anomaly include all except -
 (A) Tall and P wave (B) Right ventricular hypertrophy
 (C) Arrhythmias (D) Prolonged P-R interval
139. P.M.L. preservation technique during M.V.R. is developed by -
 (A) Carpentier (B) Walter Lillehei
 (C) Alfieri (D) Kirklin
140. Which one of the following is anterior aortic root enlargement technique -
 (A) Nicks technique (B) Nonj technique
 (C) Rittenhouse Monogenic technique (D) Ross-Konno operation
141. Most common site for Aschoff's nodule -
 (A) Interventricular septum (B) Epicardium
 (C) Pericardium (D) Mitral & aortic valve
142. Blood in cardioplegia solution was introduced by -
 (A) Bretschneider (B) Buckberg
 (C) Biglow (D) Metrose
143. Unstable angina is defined as the angina occurring at rest for more than _____ minutes -
 (A) 5 minutes (B) 10 minutes
 (C) 15 minutes (D) 20 minutes
144. Following maneuvers are used for haemodynamic stability during OPCABG -
 (A) Trendelenburg position (B) Opening the right pleural space
 (C) Hypothermia (D) Temporary ventricular pacing wire use.
145. For I.T.A. irrigation and wrapping, we use solution of 50 ml R.L. with 50 mg S.N.P., 30 ml heparinized blood and _____ mg papaverine dissolved in 20 ml N.S. _____
 (A) 10 mg (B) 20 mg
 (C) 30 mg (D) 40 mg
146. Coronary endarterectomy is most often performed on -
 (A) L.A.D. (B) Distal R.C.A.
 (C) P.D.A. (D) OM
147. Patency of LIMA grafts to L.A.D. at 10 - 20 years of operation is -
 (A) 70 - 80% (B) 80 - 85%
 (C) 85 - 90% (D) 90 - 95%
148. Which randomised clinical trial comparing PCI and CABG; extent of revascularization with CABG was found higher than with P.C.I. -
 (A) BARI (B) EAST
 (C) Both (A) and (B) (D) None of the above
149. Which arterial graft is not used for C.A.B.G. -
 (A) Right Gastroepiploic artery (B) Left Gastroepiploic artery
 (C) Inferior epigastric artery (D) Splenic artery

150. Complete revascularization is defined as bypassing all severe stenoses of at least _____ % diameter reduction in all coronary arterial trunks -
 (A) 50% (B) 70%
 (C) 80% (D) 90%
151. Post infarction V.S.D. is usually located in which portion of the ventricular septum -
 (A) Anterior (B) Posterior
 (C) Interior wall (D) All are equal
152. Best time for operation of post M.I. - VSD is -
 (A) Immediately (B) 1st week
 (C) 3 - 6 weeks (D) after 6 weeks
153. Papillary muscle rupture typically occur _____ days after acute M.I. -
 (A) 1 - 2 days (B) 2 - 7 days
 (C) after 1 week (2nd week) (D) after 2 weeks (3rd week)
154. For mitral valve surgery, when a bioprosthesis is inserted or annuloplasty performed; anticoagulation is continued for -
 (A) 4 - 6 weeks (B) 2 - 3 months
 (C) 4 - 6 months (D) 6 - 12 months
155. The leaflets of which mechanical valve open at 90 degree -
 (A) On - X (B) St.-jude Medical
 (C) The meditronic ATS valve (D) The Omniscience tilting disc
156. The ratio of diameter at sinutubular junction to L.V.O.T. at aortic annulus is -
 (A) 0.76 (B) 0.84
 (C) 0.92 (D) 0.96
157. Which one of the following is not a stentless Xenograft -
 (A) Freestyle Glutaraldehyde-preserved porcine bioprosthesis
 (B) Toronto SPV Glutaraldehyde-preserved porcine bioprosthesis
 (C) Mosaic Glutaraldehyde-preserved porcine bioprosthesis
 (D) Cryolife - O' Brien porcine aortic valve
158. Which one of the following is TAVI valve -
 (A) Edwards Prima (B) Sapien valve
 (C) Cryolife-O'Brien (D) Pericarbon freedom
159. The first human to human heart transplant was performed by -
 (A) Christiaan Barnard (B) Adran Kantrowitz
 (C) Merrill & Collegues (D) Hardy
160. Therapeutic strategy for rejection with hemodynamic compromise after heart transplant includes all except -
 (A) Methylprednisolone 1 gm Y_v for 3 days
 (B) Gytolytic therapy with thymoglobulin
 (C) Prompt plasmapheresis for 3 days
 (D) All of the above

161. Surgical Mx of aortic valve disease in a child does not include -
 (A) Enlargement of the aortic annulus (B) Ross procedure
 (C) Incision of fused commissures (D) Insertion of biological porcine valve
162. Surgical Mx of Aortic regurgitation is not indicated in -
 (A) Moderate AR with normal left end diastolic dimension 70 mm
 (B) Moderate AR with symptoms of C.H.F.
 (C) Moderate AR with normal left ventricular function
 (D) Moderate to reverse AR with cardiomegaly on CXR.
163. The most common location of accessory pathway in WPW syndrome type A
 (A) Left free wall (B) Posterior septum
 (C) Right free wall (D) Anterior septum
164. The most common pacing mode used in patents with sinus node dysfunction -
 (A) AAI (B) VVI
 (C) DVI (D) DDD
165. Indication of IABP insertion include all except -
 (A) Unstable angina (B) Acute papillary muscle rupture
 (C) Ischemic V.S.D. (D) Severe A.R. with heart failure
166. Which among the following drug is not a monoclonal antibody, used in heart transplant patient-
 (A) Basiliximab (B) OKT3
 (C) Antithymocyte globulin (D) Daclizumab
167. Which of the following is not a constraint device used in the management of cardiomyopathy
 (A) Cardio Support system (B) Heart Booster device
 (C) Kantrowitz Cardiovad (D) Dynamic Cardiomyoplasty
168. Use a profound systemic hypothermia (<20°C) permits extension of the duration of aortic occlusion and spinal cord ischemia to _____ without an increase in prevalence of paraplegia or paraparesis -
 (A) More than 30 minutes (B) More than 60 minutes
 (C) More than 100 minutes (D) More than 120 minutes
169. The artery of Adamkiewicz arise from most commonly -
 (A) T₉ to T₁₂ (B) T₄ to T₆
 (C) T₆ to T₉ (D) T₁₂ to L₂
170. When a clamp is placed at the level of the diaphragm for 60 minutes, paraplegia or paraparesis develops in about _____ % of patients -
 (A) 10% (B) Less than 0.1%
 (C) Less than 1% (D) More than 10%
171. Which of the following drug is widely used clinically for protection of the brain and spinal cord during operation requiring circulatory arrest -
 (A) Thiopentone (B) Methyl Prednisolone
 (C) Naloxone (D) All of the above

172. Aortic dissection confined to ascending aorta is classified as -
 (A) De Bakey type I (B) De Bakey type II
 (C) De Bakey type III (D) Stanford type B
173. Chronic aortic dissection is defined as the separation of the outer layer from inner layer of the media for more than _____
 (A) 1 day (B) 1 week
 (C) 2 weeks (D) 3 weeks
174. Aortic aneurysm enlarges at the fastest rate -
 (A) Ascending aorta (B) Aortic arch
 (C) Thoracic aorta (D) Abdominal aorta
175. Which of the following is not an indication for pulmonary thromboendarterectomy -
 (A) Symptomatic patients who have hemodynamic or ventilatory impairment at rest
 (B) Patients in whom thrombolysis therapy is contraindicated
 (C) Patients who develop marked pulmonary hypertension
 (D) Distal pulmonary thrombi beyond segmental arteries
176. The indexed EOA less than _____ is considered patient / prosthesis mismatch in aortic position -
 (A) $0.80 \text{ cm}^2/\text{m}^2$ (B) $0.85 \text{ cm}^2/\text{m}^2$
 (C) $0.90 \text{ cm}^2/\text{m}^2$ (D) $0.95 \text{ cm}^2/\text{m}^2$
177. First order chordae insert on which part of the mitral valve leaflets -
 (A) Free edge of the leaflets
 (B) near the annulus
 (C) at the junction of the rough and clear zone
 (D) at the ridge that corresponds to the line of leaflets coaptation
178. Who first reported successful mitral valve replacement using a mechanical prosthesis (in 1961)
 (A) Starr and Edwards (B) Lillehei
 (C) Kirklin (D) Gibbon
179. The normal mitral valve orifice area in an adult is -
 (A) $2 - 4 \text{ cm}^2$ (B) $4 - 6 \text{ cm}^2$
 (C) $6 - 8 \text{ cm}^2$ (D) $8 - 10 \text{ cm}^2$
180. Which one of the following is not a determinant of echocardiographic mitral valve score -
 (A) Leaflet mobility (B) Subvalvar thickening
 (C) Calcification (D) S.E.C.
181. The most common malignant tumor of the heart -
 (A) Myxoma (B) Angiosarcoma
 (C) Fibrosarcoma (D) Malignant teratoma

182. The first suggestion that wounds of the heart and great vessels could be sutured by -
 (A) Roberts (B) Rehn
 (C) William (D) Hill
183. Symptomatic arrhythmias in sick sinus syndrome includes all except -
 (A) Tachycardia - bradycardia syndrome (B) Junctional bradycardia
 (C) Profound sinus bradycardia (D) Atrioventricular block
184. The most frequently used energy source in Ablation modalities during modified Maze III procedure -
 (A) Cryoablation (B) Microwave
 (C) Laser (D) RF
185. Which one of the following is not a technique for transfer of the pulmonary autograft into the aortic position (Ross procedure) -
 (A) Subcoronary implantation (B) Aortic root replacement
 (C) Aortic root inclusion technique (D) None of the above
186. Which one of the following is not an intracorporeal L.V.A.D. -
 (A) IABP (B) Novacor II
 (C) Thratec Heart Mate (D) Berlin Heart
187. Which one of the following is not a hemodynamic variable for LVAD consideration -
 (A) Cardiac index <2 liters/min/m²
 (B) Systolic B.P. <80 mm Hg.
 (C) Pulmonary capillary wedge pressure >20 mm Hg,
 (D) On minimal medical therapy
188. MIDCAB procedure was introduced by -
 (A) Benetti et al (B) Flavalaro
 (C) Sabiston & Colleagues (D) Kolesov
189. During right heart catheterization, a greater than _____ % step up in the oxygen saturation between the right atrium and pulmonary artery is diagnostic of VSD.
 (A) 2% (B) 4%
 (C) 6% (D) 8%
190. Which one of the following is not a contraindication for Angiogenic therapy in CAD patients-
 (A) Hypercoagulability
 (B) Diabetic retinopathy
 (C) Previously failed attempts of PTCA/CABG
 (D) Impaired Renal function
191. The ulnar nerve conduction velocity value is strongly supportive of thoracic outlet syndrome when -
 (A) 48 m/s or below (B) 58 m/s or below
 (C) 68 m/s or below (D) 78 m/s or below

192. Which are of the following is the systemic disease associated with thymoma -
 (A) Myasthenia gravis (B) Rheumatoid arthritis
 (C) Ulcerative Colitis (D) All of the above
193. Who performed the first human lung transplantation in 1963 -
 (A) Vladimir Demikhov (B) James D. Hardy
 (C) Derom & Colleagues (D) Frames & Colleagues
194. The most common benign lung lesion is -
 (A) Hamartoma (B) Alveolar adenoma
 (C) Mucous gland adenoma (D) Chondroma
195. Pulmonary artery catheter findings of constrictive pericarditis includes all except -
 (A) Square root sign in right and left ventricular tracings
 (B) Near equalization of CPV, PCWP and Pulmonary artery diastolic pressure
 (C) Prominent Y descent in C.V.P. tracing
 (D) C.V.P. < 14 mm Hg.
196. Diagnostic sign of Cardiac tamponade are all except -
 (A) Pulsus paradoxus on physical examination
 (B) Kussmaul's sign on physical examination
 (C) Near equalization of C.V.P. & PCWP on cath study
 (D) Right ventricular diastolic collapse on echo
197. Which of the following is not among the "Ten Commandments" for relation of patients with tricuspid atresia for the Fontan Procedure -
 (A) Mean pulmonary artery pressure ≤ 15 mm Hg.
 (B) Incompetent left atrioventricular valve
 (C) Pulmonary artery resistance < 4 units/m²
 (D) Sinus rhythm
198. Which one of the following is not a surgical option for CCTGA patients -
 (A) Double switch operation (B) The Rastelli-senning procedure
 (C) Senning or Mustard procedure (D) Norwood operation
199. Carpentier's functional classification of mitral valve disease, Type III A means -
 (A) Normal leaflet motion
 (B) Restricted leaflet motion in systole
 (C) Increased leaflet motion
 (D) Decreased leaflet motion in both systole & diastole
200. The least average survival in a patient of aortic stenosis expected when patient develops symptoms of -
 (A) Angina (B) Syncope
 (C) C.H.F. (D) Palpitations