

पुस्तिका में पृष्ठों की संख्या : 32

Number of Pages in Booklet : 32

पुस्तिका में प्रश्नों की संख्या : 180

No. of Questions in Booklet : 180

प्रश्न-पत्र पुस्तिका संख्या /

Question Paper Booklet No.

5203005

**SSAPCT-02**

**Paper Code : 21**

**SUBJECT : Cardio Vascular &  
Thoracic Surgery**

समय : 3.00 घण्टे

Time : 3.00 Hours

परीक्षा दिनांक :- 13/08/2020

परीक्षा समय :- 9:00 To 12:00

अधिकतम अंक : 180

Maximum Marks : 180

प्रश्न-पत्र पुस्तिका एवं उत्तर पत्रक के पेपर सील/पोलिथीन बैग को खोलने के बाद परीक्षार्थी प्रश्न-पत्र पुस्तिका संख्या को उत्तर पत्रक पर सावधानीपूर्वक अंकित करें। इसमें किसी भी प्रकार की त्रुटि होने पर जिम्मेदारी अभ्यर्थी की होगी।

The candidate fill the Question Paper Booklet No. on Answer Sheet carefully after opening the Paper Seal / Polythene bag. Candidate himself shall be responsible for any error.

**परीक्षार्थियों के लिए निर्देश**

1. सभी प्रश्नों के उत्तर दीजिए।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए।
4. एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
5. प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले अथवा बबल को उत्तर पत्रक पर नीले बॉल प्वाइंट पेन से गहरा करना है।
6. OMR उत्तर पत्रक इस परीक्षा पुस्तिका के अन्दर रखा है। जब आपको परीक्षा पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्र निकाल कर ध्यान से केवल नीले बॉल पॉइंट पेन से विवरण भरें।
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। किसी भी प्रश्न से संबंधित गोले या बबल को खाली छोड़ना गलत उत्तर नहीं माना जायेगा।
8. मोबाइल फोन अथवा 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।
9. कृपया अपना रोल नम्बर ओ.एम.आर. पत्रक पर सावधानीपूर्वक सही भरें। गलत अथवा अपूर्ण रोल नम्बर भरने पर 5 अंक कुल प्राप्तांकों में से काटे जा सकते हैं।

**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 विविध नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही विभाग ऐसे अभ्यर्थी को भविष्य में होने वाली विभाग की समस्त परीक्षाओं से विवर्जित कर सकता है।

**INSTRUCTIONS FOR CANDIDATES**

1. Answer **all** questions.
2. **All** questions carry equal marks.
3. Only **one** answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using **BLUE BALL POINT PEN**.
6. The **OMR** Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with **blue ball point pen** only.
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. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.
8. 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 as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. **5 Marks** can be deducted for filling wrong or incomplete Roll Number.

**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 liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

इस परीक्षा पुस्तिका को तब तक न खोलें जब तक कहा न जाए।

Do not open this Test Booklet until you are asked to do so.

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1. Lutembacher syndrome is

- (1) Congenital mitral stenosis + O.S. – ASD
- (2) Rheumatic mitral stenosis + O.S. – ASD
- (3) Rheumatic mitral stenosis + O.P. – ASD
- (4) Congenital mitral stenosis + O.P. – ASD

2. Which is not a major John's criteria ?

- (1) Arthritis
- (2) Arthralgia
- (3) Chorea
- (4) Carditis

3. An aneurysm of the sinus of Valsalva usually arises from

- (1) Right aortic sinus
- (2) Left aortic sinus
- (3) Non-coronary sinus
- (4) Pulmonary outflow

4. The type of involvement of the heart in rheumatic fever is

- (1) Fibrinous Pericarditis
- (2) Myocarditis
- (3) Endocarditis
- (4) Pancarditis

5. Which is not an indication for surgery in prosthetic valve endocarditis ?

- (1) Fungal P.V.E.
- (2) Valvular dysfunction or dehiscence
- (3) New onset of heart block
- (4) Size of vegetation of less than 1.5 cm

6. Which of these methods are used to classify the severity of cardiovascular disease ?

- (1) NYHA
- (2) CCS
- (3) SAS
- (4) All of the above

7. All of these factors increase the embolic potential in rheumatic mitral valve disease except
- (1) Atrial fibrillation
  - (2) Size of L.A.
  - (3) Decreased LVEF
  - (4) Severity of disease
8. Mechanism of exertional syncope in a patient of Aortic stenosis
- (1) Fall of S.V.R.
  - (2) Failure of forearm vasoconstriction during leg exercise.
  - (3) Cardiac output fails to rise due to severe fixed obstruction.
  - (4) All of the above.
9. Which is not a degenerative cause of chronic M.R. ?
- (1) S.L.E.
  - (2) Euler's Danlos syndrome
  - (3) Marfan's syndrome
  - (4) Mitral valve prolapse

10. Drug of choice of mitral valve prolapse syndrome with palpitations and chest pain is
- (1) Beta-blockers
  - (2) Diuretics
  - (3) ACE inhibitors
  - (4) Digoxin
11. On 2-D echo, which quantitative indice does not suggest severe mitral regurgitation ?
- (1) Regurgitant fraction  $\geq 50\%$
  - (2) E.R.O.  $\geq 40\%$
  - (3) Regurgitant volume  $\geq 60$  ml
  - (4) Vena contracta width
12. The most common complication of M.S. is
- (1) A.F.
  - (2) I.E.
  - (3) Systemic embolism
  - (4) Pulmonary oedema

13. Which is not a physical finding of M.S. ?
- (1) Loud  $S_1$
  - (2) Soft  $S_2$
  - (3) Opening snap
  - (4) Diastolic rumble
14. Abnormal left ventricular ejection fraction in patients of aortic stenosis can be the result of
- (1) Reduced intrinsic myocardial function.
  - (2) Reduced preload.
  - (3) A preload-afterload mismatch.
  - (4) All of the above.
15. Surgical management of HOCM as left ventricular myectomy and myotomy is also known as
- (1) Morrow procedure
  - (2) Nick's procedure
  - (3) Konno-Rastan procedure
  - (4) Mustard procedure
16. Aortoventriculoplasty seems the procedure of choice for
- (1) Tunnel stenosis.
  - (2) Hypoplastic annulus.
  - (3) Stenosis secondary to previously implanted small aortic valve prosthesis.
  - (4) All of the above.
17. Most common combination of rheumatic valvular disease is
- (1) M.S.  $\bar{C}$  aortic valve disease
  - (2) M.R.  $\bar{C}$  aortic valve disease
  - (3) M.S.  $\bar{C}$  T.S.
  - (4) M.S.  $\bar{C}$  A.S.  $\bar{C}$  T.S.
18. Which syndrome is associated with valvar pulmonary atenosis ?
- (1) Rubella syndrome
  - (2) Noonan's syndrome
  - (3) Williams syndrome
  - (4) All of the above

19. The height of the R wave in  $V_1$  in mm multiplied by \_\_\_\_\_ is predictive of right ventricular peak systolic pressure.

- (1) 3
- (2) 4
- (3) 5
- (4) 6

20. After balloon pulmonary valvuloplasty in patients of P.S., restenosis is defined as gradient of \_\_\_\_\_ mm Hg or more.

- (1) 30
- (2) 40
- (3) 50
- (4) 60

21. Functional tricuspid regurgitation because of annular dilatation is common beyond the critical annular diameter of more than

- (1)  $21 \text{ mm/m}^2$
- (2)  $23 \text{ mm/m}^2$
- (3)  $25 \text{ mm/m}^2$
- (4)  $27 \text{ mm/m}^2$

22. These are the factors favouring P.T.M.C. in a patient of mitral stenosis except

- (1) Advanced age
- (2) Severe Pulmonary hypertension
- (3) Pregnancy
- (4) Severe sub-valvular lesions

23. Which one of the following is not a bileaflet mechanical prostheses ?

- (1) St. Jude Medical Mechanical heart valve.
- (2) ATS Medical open pivot mechanical heart valve.
- (3) On-X prosthetic heart valve.
- (4) Omnicarbon Cardiac valve prosthesis.

24. Which one of the following is not a stentless bioprostheses ?

- (1) Medtronic freestyle Aortic bioprosthesis .
- (2) The Edward Prima plus bioprosthesis.
- (3) Toronto SPV valve.
- (4) Medtronic mosaic porcine bioprosthesis.

25. The treatment of choice for infective endocarditis and mixed valvular or aortic root pathology in patients who cannot tolerate anticoagulation is

- (1) Stentless bioprosthesis.
- (2) Carpentier-Edwards pericardial bioprosthesis.
- (3) Meditronic mosaic porcine bioprosthesis.
- (4) Allografts.

26. How much % of left I.T.As (LIMA) to L.A.D. anastomosis grafting are patent 10-20 yrs after surgery ?

- (1) More than 95 %
- (2) 90 – 95 %
- (3) 85 – 90 %
- (4) 80 – 85 %

27. Coronary endarterectomy is most commonly needed in which coronary artery disease ?

- (1) R.C.A.
- (2) L.A.D.
- (3) L.Cx.
- (4) P.D.A.

28. Which of the following investigation is not used to distinguish myocardial scar from ischemia ?

- (1) M.R.I.
- (2) P.E.T.
- (3) T.M.T.
- (4) Thallium Scintigraphy

29. Unstable angina is defined as the angina occurs at rest for more than

- (1) 10 mins
- (2) 15 mins
- (3) 20 mins
- (4) 30 mins

30. V.S.D. occurs within \_\_\_\_\_ week of an myocardial infarction.

- (1) 1<sup>st</sup>
- (2) 2<sup>nd</sup>
- (3) 3<sup>rd</sup>
- (4) 4<sup>th</sup>

31. Haemodynamic stability during manipulation of heart during OPCABG surgery can be preserved by following maneuvers.
- (1) Trendelenburg position.
  - (2) Opening of right pleural space.
  - (3) Pacing to prevent prolonged bradycardia.
  - (4) Hypovolemia and hypothermia.
32. Which of the following is not a type of stress testing in CAD patients ?
- (1) T.M.T.
  - (2) Myocardial perfusion imaging
  - (3) Exercise radionuclide angiography
  - (4) 2-D echocardiography
33. For distal anastomoses during CABG, venotomy should be \_\_\_\_\_ % larger than arteriotomy.
- (1) 10 – 20 %
  - (2) 20 – 30 %
  - (3) 30 – 40 %
  - (4) should be equal

34. In hybrid MIDCAB approach, which venel should be bypassed ?
- (1) L.A.D.
  - (2) R.C.A.
  - (3) O.M.
  - (4) P.D.A.
35. Who popularize the use of autologous saphenous vein graft in C.A.B.G. ?
- (1) Sabiston
  - (2) Favaloro
  - (3) Kolesov
  - (4) Kirklin
36. To relieve spasm of Radial or internal mammary artery during CABG, we wrap the graft with moistened sponge with papaverine in the concentration of
- (1) 20 mg/20 ml
  - (2) 20 mg/100 ml
  - (3) 20 mg/500 ml
  - (4) 20 mg/1000 ml



37. Radial grafts should not be used to graft coronaries with less than \_\_\_\_\_ stenosis because of low patency.
- (1) 50 %
  - (2) 70 %
  - (3) 80 %
  - (4) 90 %
38. Arterial grafts for CABG are all except
- (1) Internal mammary graft
  - (2) Right Gastroepiploic artery
  - (3) Left Gastroepiploic artery
  - (4) Radial artery
39. Stress testing should be done after how much time of surgery (CABG) to obtain a baseline and to prescribe an appropriate cardiac rehabilitation programme ?
- (1) 6 weeks to 3 months
  - (2) 3 months to 6 months
  - (3) 6 months to 9 months
  - (4) 9 months to 12 months
40. Coronary spasm is the mechanism of rest pain in
- (1) Unstable angina
  - (2) Prinzmetal angina
  - (3) Myocardial infarction
  - (4) Emotion induced angina
41. Cause of painless myocardial infarction are all except
- (1) Diabetic patients
  - (2) Elderly patients with dementia
  - (3) In pulmonary oedema
  - (4) ACE inhibitor therapy
42. Postprandial angina occurs within \_\_\_\_\_ of a meal.
- (1) 15 minutes
  - (2) 30 minutes
  - (3) 45 minutes
  - (4) 60 minutes



43. A patient of C.A.D. can perform an activity requiring 2-5 MFTS. What is the functional CCS classification of this patient ?

- (1) Class I
- (2) Class II
- (3) Class III
- (4) Class IV

44. Indication for C.A.B.G. in CAD patients (Asymptomatic) is

- (1) Chronic stable angina with left main stenosis  $\geq 50\%$ .
- (2) Left main equivalent.
- (3) T.V.D. with LVEF  $< 50\%$ .
- (4) All of the above.

45. Cardiac surgery (CABG) is preferred in a patient with Syntax Score of \_\_\_\_

- (1) More than 10
- (2) More than 14
- (3) More than 18
- (4) More than 22

46. Who introduced the sequential grafting in CABG ?

- (1) Flemma
- (2) Kay
- (3) Carpentier
- (4) William Longmire

47. During F.D.G. – P.E.T. for C.A.D. patients; a portion of myocardium shows decreased perfusion with preserved glucose utilization. What is the pathology ?

- (1) Stunned myocardium
- (2) Hibernating myocardium
- (3) Nontransmural scar tissue
- (4) Transmural scar tissue

48. Right heart catheterization or pulmonary angiogram is required before CABG, if patient has following signs on physical examination except

- (1) Clubbing
- (2) Cyanosis
- (3) Right ventricular heave
- (4) Third heart sound ( $S_3$ )



49. Relative contraindications to the use of bilateral I.T.As include all except
- (1) Severe C.O.P.D.
  - (2) Diabetes mellitus
  - (3) Hypertension
  - (4) Emergency operation
50. The prime objective of CABG is to obtain complete revascularization by bypassing all severe stenosis of at least \_\_\_\_\_ diameter reduction of all coronaries.
- (1) 50 %
  - (2) 70 %
  - (3) 80 %
  - (4) 90 %
51. Radionuclide used in myocardial perfusion scan are all except
- (1) Technetium
  - (2) Thallium
  - (3) Rubidium
  - (4) Dobutamine
52. Which one is the randomized trial of C.A.B.G. Vs. P.C.I. ?
- (1) B.A.R.I.
  - (2) EAST
  - (3) GABI
  - (4) All of the above
53. Heath and Edward danification relates to
- (1) A.V. Canal disease
  - (2) Pulmonary vascular disease
  - (3) T.G.A.
  - (4) Tricuspid atresia
54. Egg on appearance is seen on X-ray of
- (1) T.O.F.
  - (2) T.G.A.
  - (3) Tricuspid atresia
  - (4) Interrupted Aortic Arch (I.A.A.)

55. Rastell classification is used for

- (1) A.V. canal defect
- (2) T.G.A.
- (3) Tricuspid atresia
- (4) Eostein's anomaly

56. Which statement is incorrect regarding small V.S.D. ?

- (1)  $Q_p : Q_s < 1.75$
- (2) V.S.D. resistance index  $> 20$  units/m<sup>2</sup>
- (3) Normal R.V. systolic pressure
- (4) Approximate the size of aortic orifice

57. Which is not a Fontan's commandment ?

- (1) Sinus rhythm
- (2) Normal caval drainage
- (3) P.V.R.  $< 4$  wood units/m<sup>2</sup>
- (4) Mean Pulmonary arterial pressure  $> 15$  mm Hg

58. Which is not a cause of cyanosis in A.S.D. ?

- (1) P.V.P.V.C.
- (2) T.A.P.V.C.
- (3) Eisenmengerization
- (4) Selective drainage of IVC to L.A.

59. Management of a patient with tricuspid atresia within the 1<sup>st</sup> month of life may include

- (1) Creation of a systemic to pulmonary artery shunt
- (2) P.A. Banding
- (3) B.D. Glenn's surgery
- (4) Fontan's operation

60. Ductus arteriosus is derived from

- (1) 2<sup>nd</sup> aortic arch
- (2) 4<sup>th</sup> aortic arch
- (3) 6<sup>th</sup> aortic arch
- (4) 8<sup>th</sup> aortic arch



61. Ductal dependent circulation include all except
- (1) Pulmonary atresia with intact ventricular septum.
  - (2) Aortic atresia or Interrupted aortic arch.
  - (3) T.G.A. with intact IAS/IVS.
  - (4) Tricuspid atresia with intact IVS.
62. The normal process of functional closure begins \_\_\_\_\_ after birth.
- (1) within 4 hrs.
  - (2) within 4 – 10 hrs.
  - (3) within 10 – 15 hrs.
  - (4) After 15 hrs.
63. Cyanotic spell in T.O.F. are usually seen
- (1) After 6 years of age
  - (2) After 6 months of age
  - (3) Before 6 weeks of age
  - (4) After 6 weeks of age
64. Recoarctation of aorta is defined as systemic arm to leg resting pressure gradient of
- (1) more than 10 mm Hg
  - (2) more than 20 mm Hg
  - (3) more than 30 mm Hg
  - (4) more than 40 mm Hg
65. Anterior malaligned V.S.D. is found in
- (1) T.O.F.
  - (2) Interrupted aortic arch
  - (3) D.O.R.V.
  - (4) Tausig-Bling heart
66. Which D.O.R.V. variant resemble's T.G.A. ?
- (1) D.O.R.V. with subaortic V.S.D. without P.S.
  - (2) D.O.R.V. with subaortic V.S.D. with P.S.
  - (3) D.O.R.V. with subpulmonic V.S.D. without P.S.
  - (4) D.O.R.V. with subpulmonic V.S.D. with P.S.



67. Clinical recognition of T.G.A. is based on the following features except

- (1) Male child
- (2) Low birth weight
- (3) Cyanosis in the neonatal period
- (4) Radiologic evidence of increased pulmonary blood flow in the presence of cyanosis

68. Most common chamber involved in Cardiac trauma

- (1) R.A.
- (2) R.V.
- (3) L.A.
- (4) L.V.

69. Surgery is indicated in cardiac trauma in all except

- (1) Cardiac contusion
- (2) Cardiac rupture
- (3) Ventricular septal rupture
- (4) Atrioventricular valve rupture

70. Absolute contraindication of ECMO are all except

- (1) Age > 65 years
- (2) Recoverable cardiac disease
- (3) Non-recoverable cardiac disease
- (4) Non-recoverable respiratory disease

71. Indication for ECMO for respiratory failure are all except

- (1) ARDS
- (2) Pneumonia
- (3) Multiple organ failure
- (4) Primary graft failure following lung transplantation

72. Which one of the following statement is incorrect regarding cell transplantation therapy for cardiac patients ?

- (1) Transplanted cells improve regional perfusion.
- (2) It results in increase in wall thickness.
- (3) It stimulates angiogenesis in chronic ischemic zone.
- (4) The benefits of therapy is transient.



73. Which one is the mechanism of the cell transplantation therapy in cardiovascular disease ?

- (1) Cell engraftment
- (2) Matrix remodeling
- (3) Angiogenesis
- (4) All of the above

74. For the restoration of the sinus rhythm in a patient of A.F., Cox-Maze procedure is useful. Which statement is incorrect regarding this ?

- (1) Brain natriuretic peptide & aldosterone level decreased after 6 months of surgery.
- (2) Brain natriuretic peptide & aldosterone level increased after 6 months of surgery.
- (3) This procedure incorporates a series of linear incisions of both atria.
- (4) Radio-frequency, cryotherapy and microwave techniques are the modalities used now-a-days.

75. The MIDCAB procedure was introduced in 1995 for single vessel off pump bypass using LIMA to LAD bypass by

- (1) Benetti et al
- (2) Sabiston and colleagues
- (3) Michel Mirowski
- (4) Paul Zoll, M.D.

76. Which muscle is used in the treatment of D.C.M.P. as dynamic cardiomyopathy ?

- (1) Latissimus dorsi
- (2) Serratus anterior
- (3) Pectoralis major
- (4) Rectus abdominus

77. Which of the following is extracorporeal type of LVAD ?

- (1) I.A.B.P.
- (2) Novacor II
- (3) Thoratec Heart Mate
- (4) ECMO

78. Acceptable candidate for Cardiowest total artificial heart must have following parameters except

- (1) Body surface area greater than or equal to  $1.7 \text{ m}^2$
- (2) A cardiothoracic ratio of  $> 0.5$
- (3) A left ventricular diastolic dimension of  $> 66 \text{ mm}$
- (4) Combined ventricular volume of less than 1.5 litre

79. Which is not a therapeutic strategy for acute rejection of heart transplant with haemodynamic compromise ?

- (1) Methyl Prednisolone 1 gm I/V daily for 3 days.
- (2) Prompt plasmapheresis daily for 3 days.
- (3) Cytolytic therapy with thymoglobulin or OKT 3
- (4) Change in antibiotic strategy.

80. First clinical use of a total artificial heart as a bridge to transplant in 1969 was done by

- (1) Dr. Denton Cooley
- (2) Dr. Barney Clark
- (3) Dr. Robert Tools
- (4) Dr. De Vries

81. Which is not a total artificial heart ?

- (1) Syncardia
- (2) Abiocor
- (3) Cardiowest
- (4) Heart ware

82. These are the causes of continuous murmur except one

- (1) AS with AR
- (2) RSOV to RA rupture
- (3) P.D.A.
- (4) Coronary A-V fistula

83. In Electrocardiogram, Right axis deviation is found in
- (1) Ostium Primum A.S.D.
  - (2) Ostium Secundum A.S.D.
  - (3) A-V Canal defect
  - (4) Common atrium
84. Enlarged left atrium is seen in X-rays by all except
- (1) Double shadow.
  - (2) Lifting of left bronchus.
  - (3) Right lateral view shows obliteration of retrosternal shadow.
  - (4) Posterior displacement of oesophagus on Barium swallow.
85. Which is not a feature of L-V diastolic overload ?
- (1) Presence of q wave in  $V_5-V_6$
  - (2) Tall T wave in  $V_5-V_6$
  - (3) Tall R wave in  $V_5-V_6$
  - (4) Tall R wave in  $V_1-V_2$
86. Causes of palpitations are all except
- (1) Left to Right shunt
  - (2) Right to Left shunt
  - (3) Electronic Pacemaker
  - (4) Prosthetic heart valve
87. Which of these drugs does not cause postural hypotension in cardiac patient ?
- (1) Diuretics
  - (2) Calcium channel blockers
  - (3) Nitrates
  - (4)  $\beta$ -blockers
88. Amyl Nitrite increases all murmurs except
- (1) Mitral stenosis
  - (2) Pulmonary stenosis
  - (3) T.O.F.
  - (4) V.S.D.  $\bar{C}$  pulmonary hypertension
89. The commonest cyanotic heart disease after 2 years of age
- (1) T.O.F.
  - (2) Tricuspid Atresia
  - (3) D-T.G.A.
  - (4) Truncus Arteriosus



90. Electrocardiographic findings of acute pericarditis is

- (1) ST elevation in all leads except  $aV_R$  &  $V_1$ .
- (2) Normal ST segments but with T wave flattening.
- (3) T wave inversion without q wave.
- (4) All of the above.

91. Isolated R.V. dysfunction is manifested by all except

- (1) High C.V.P.
- (2) Variable P.A. pressure
- (3) Hypervolumic left ventricle
- (4) Low cardiac output

92. In postoperative period in ICU, hypothermia can cause all except

- (1) Predispose arrhythmias.
- (2) Increased S.V.R. and cause hypertension.
- (3) Produce platelet dysfunction.
- (4) Decrease peripheral  $O_2$  consumption and  $CO_2$  production by shivering.

93. In postoperative management, the tidal volume and respiratory rate are selected to achieve a minute ventilation of

- (1) Approximate 100 ml/kg./min.
- (2) Approximate 50 ml/kg./min.
- (3) Approximate 80 ml/kg./min.
- (4) Approximate 120 ml/kg./min.

94. One unit of platelet transfusion (R.D.P.) should increase the platelet counts by

- (1) 5 – 7000
- (2) 7 – 10000
- (3) 10 – 15000
- (4) 15 – 20000

95. Inhaled nitric oxide (NO) is administered via the ventilatory circuit for pulmonary vasodilatation in the dose of

- (1) upto 40 ppm
- (2) 40 – 60 ppm
- (3) 60 – 80 ppm
- (4) More than 80 ppm

96. Packed Red Blood Cells (P.C.V.) have an average haematocrit of

- (1) 30 %
- (2) 50 %
- (3) 70 %
- (4) 100 %

97. Failure criterias during weaning from the ventilation are all except

- (1) Heart rate changes by more than 20%.
- (2) Systolic B.P. rises by more than 20 mm Hg.
- (3) Respiratory rate increases by more than 10 breaths/min.
- (4)  $PCO_2$  falls below 40 torr.

98. Normal Cardiac index is

- (1) 1.6 to 2.2 L/min/m<sup>2</sup>.
- (2) 2.2 to 4.0 L/min/m<sup>2</sup>.
- (3) 4.0 to 5.2 L/min/m<sup>2</sup>.
- (4) 5.2 to 6.5 L/min/m<sup>2</sup>.

99. What is incorrect regarding T.A.B.P. ?

- (1) Aortic end-diastoliz pressure is lower.
- (2) Balloon-assisted peak systolic pressure is lower.
- (3) Coronary perfusion is increased by diastolic augmentation.
- (4) Increased impedance to ejection during systole.

100. L.M.W.H. is monitored by

- (1) P.T./INR
- (2) a P.T.T.
- (3) Anti-factor Xa
- (4) Anti-factor IVa

101. What is the most common pathogen causing prosthetic valve endocarditis ?

- (1) Staphylococci
- (2) Enterococci
- (3) Fungi
- (4) Gram negative organisms

102. What should be target INR in Bileaflet mitral valve and aortic valve with atrial fibrillation ?

- (1) 1.5 – 2.0
- (2) 2.0 – 2.5
- (3) 2.5 – 3.5
- (4) 3.5 – 4.0

103. Which of the following does not decrease I.N.R. when given along with oral anticoagulation ?

- (1) Green leafy vegetables
- (2) Green tea
- (3) Soyabean oil
- (4) Ginger and Garlic

104. Which of the following statements regarding Postpericardiectomy syndrome is incorrect ?

- (1) More common in young patients.
- (2) Reported in 15-20% of patients following open heart surgery.
- (3) It represent an autoimmune inflammatory response.
- (4) It does occur in 1<sup>st</sup> week of surgery only.

105. These rhythm changes can be seen in follow up of cardiac patients as digoxin toxicity except

- (1) A-V. block
- (2) Nonparoxysmal A.V junctional tachycardia
- (3) Sinus tachycarida
- (4) P.V.Cs (Multiform and bigeminy)

106. Early prosthetic valve endocarditis is within \_\_\_\_\_ of surgery.

- (1) 30 days
- (2) 60 days
- (3) 90 days
- (4) 120 days

107. Following are the noncardiac side effects of the prolonged use of Amiodarone except

- (1) Pulmonary toxicity
- (2) Hepatic dysfunction
- (3) Renal dysfunction
- (4) Corneal microdeposits

108. Following are the indications of permanent pacemaker (PPI) following cardiac surgery except

- (1) Complete heart block following aortic valve surgery.
- (2) Advanced second-degree heart block with a slow ventricular response.
- (3) Tachycardia-Bradycardia syndrome.
- (4) Fast ventricular response to atrial fibrillation.

109. For pneumothorax, which of the following is the treatment of choice ?

- (1) T.P.P.V.
- (2) ICD with underwater seal bag.
- (3) Thoracotomy and closure of the vent.
- (4) Wait and watch.

110. Treatment of choice for hemothorax of blood loss of greater than 500 ml/hr for consecutively 3 hrs.

- (1) Wait and watch
- (2) Needle aspiration
- (3) Intercostal tube drainage
- (4) Open thoracotomy and ligation of bleeding point

111. Which of the following is incorrect regarding flail chest ?

- (1) It is defined as fracture of  $\geq 4$  ribs unilateral or bilateral.
- (2) It results in paradoxical motion of local region.
- (3) Ventilation with I.P.P.V. is the treatment of choice for unstable patient.
- (4) Operative fixation of flail segment is not recommended.

112. Which of the following is false regarding trachea-bronchial trauma ?

- (1) Penetrating injury is more common than blunt trauma.
- (2) It manifests with persistent massive air leak.
- (3) 'Fallen lung sign' is suggestive of tracheo-bronchial injury.
- (4) Bronchoscopy is contraindicated.

**113.** Chronic lung disease is called severe when

- (1) FEV<sub>1</sub> is 60-75% of predicted value.
- (2) FEV<sub>1</sub> is 50-59% of predicted value.
- (3) FEV<sub>1</sub> is less than 50% of predicted value.
- (4) FEV<sub>1</sub> is more than 75% of predicted value.

**114.** The most common benign tumor of lung is

- (1) Hamartoma
- (2) Alveolar adenoma
- (3) Teratoma
- (4) Fibroma

**115.** Investigation of choice for pulmonary embolism is

- (1) Ventilation – Perfusion scan
- (2) M.R.I.
- (3) C.E.C.T.
- (4) 2.D-echo

**116.** The first step during pneumonectomy for Carcinoma of lung is

- (1) Ligation of Pulmonary Vein
- (2) Ligation of Pulmonary Artery
- (3) Divide the bronchus
- (4) Lymph node clearance

**117.** Hoarseness of voice secondary to bronchogenic carcinoma is usually due to the extension of tumor into

- (1) Vocal cords
- (2) Superior laryngeal nerve
- (3) Left recurrent laryngeal nerve
- (4) Right vagus nerve

**118.** Pancoast tumor usually involve

- (1) C<sub>2</sub> – C<sub>6</sub> spinal nerves
- (2) T<sub>2</sub> – T<sub>5</sub> spinal nerves
- (3) C<sub>7</sub> – T<sub>1</sub> spinal nerves
- (4) T<sub>5</sub> – T<sub>9</sub> spinal nerves



119. Standard therapy for limited stage small cell carcinoma of lung is

- (1) Chemotherapy
- (2) Radiotherapy
- (3) Surgical resection
- (4) All of the above

120. Horner's syndrome consist of

- (1) Ptosis
- (2) Miosis
- (3) Anhidrosis
- (4) All of the above

121. Visceral pleura is supplied by

- (1) Bronchial artery
- (2) Pulmonary artery
- (3) Both of the above
- (4) None of the above

122. Cause of exudative pleural effusion is

- (1) C.H.F.
- (2) Nephrotic syndrome
- (3) Cirrhosis of liver
- (4) Neoplastic diseases

123. Dose of urokinase for intrapleural fibrinolysis in treatment of empyema patients

- (1) One lac units in 100 ml saline
- (2) Five lac units in 100 ml saline
- (3) Ten lac units in 100 ml saline
- (4) Fifteen lac units in 100 ml saline

124. Which muscle is not used as a muscle flap closure of postpneumonectomy empyema space ?

- (1) Pectoralis major
- (2) Latissimus dorsi
- (3) Serratus anterior
- (4) Trapezius

125. Which is used for chemical pleurodesis ?

- (1) Bleomycin
- (2) Tetracycline
- (3) Doxycycline
- (4) All of the above

126. In which of the following procedures, Chylothorax is not occur as a complication ?

- (1) P.D.A. Surgery
- (2) Coarctation of aorta surgery
- (3) Resection of thoracic aortic aneurysm
- (4) Pericardiectomy

127. Which substance is used for PLOMBAGE thoracoplasty ?

- (1) Paraffin
- (2) Poly ethylene fag
- (3) LUCITF spheres
- (4) All of the above

128. Contraindication of decortication in empyema are all except

- (1) Major bronchial obstruction
- (2) Pulmonary destruction
- (3) Uncontrolled sepsis
- (4) Fibrothorax

129. Diaphragm pacing is indicated in all except

- (1) Central alveolar hypoventilation
- (2) High cervical spinal cord injury
- (3) End stage C.O.P.D.
- (4) L.B.B.B.

130. Oesophagus passes through the diaphragm at the level of

- (1) T<sub>6</sub>
- (2) T<sub>8</sub>
- (3) T<sub>10</sub>
- (4) T<sub>12</sub>

131. Regarding Pectus excavatum, which is incorrect ?

- (1) Posterior depression of the sternum at costal cartilage.
- (2) More frequent in boys.
- (3) Manubrium is usually at its normal position.
- (4) 1<sup>st</sup> and 2<sup>nd</sup> ribs are depressed.

132. The normal average Ulnar Nerve Conduction Velocity (UNCV) value across the thoracic outlet is
- (1) 55 m/second
  - (2) 59 m/second
  - (3) 72 m/second
  - (4) 94 m/second
133. Indications of flexible bronchoscopy are all except
- (1) Difficult intubation
  - (2) Foreign body removal
  - (3) Laser ablation
  - (4) In a case of Haemoptysis due to coagulopathy
134. For lung reduction surgeries, which parameter is most important in spirometry ?
- (1) FEV<sub>1</sub>
  - (2) F.V.C.
  - (3) T.L.C.
  - (4) F.R.C.
135. During pericardiectomy which part of the heart is to be released first ?
- (1) R.A.
  - (2) R.V.
  - (3) L.A.
  - (4) L.V.
136. During Cath study, square root sign is found in
- (1) Constrictive pericarditis
  - (2) Cardiac tamponade
  - (3) Restrictive cardiomyopathy
  - (4) All of the above
137. Most common tumor in posterior mediastinum is
- (1) Neurogenic tumors
  - (2) Teratoma
  - (3) Lymphoma
  - (4) Bronchogenic cyst
138. In thymoma all are seen except
- (1) Hypergammaglobunemia
  - (2) Hyperalbuminemia
  - (3) Red blood cell aplasia
  - (4) Myasthenia gravis



139. FEV<sub>1</sub> and DLCO of \_\_\_\_\_ % of predicted value is indicative for lung surgery.

- (1) more than 20 – 40 %
- (2) more than 40 – 60 %
- (3) more than 60 – 80 %
- (4) more than 80 %

140. Contraindication of bronchoscopy are all except

- (1) Coagulopathy.
- (2) Recent M.I.
- (3) Patients with high risk situation for increasing intracranial pressure.
- (4) All of the above.

141. Patients with an \_\_\_\_\_ MV<sub>O</sub><sub>2</sub> are at high risk of thoracic surgery.

- (1) less than 10-12 ml/kg/min
- (2) 15 to 20 ml/kg/min
- (3) 20 to 25 ml/kg/min
- (4) more than 25 ml/kg/min

142. A prolonged air leak is defined as one that last longer than \_\_\_\_\_ days postoperatively.

- (1) 3 days
- (2) 5 days
- (3) 7 days
- (4) 10 days

143. Post-pneumonectomy syndrome is torsion or compression of the \_\_\_\_\_ due to mediastinal shift after pneumonectomy.

- (1) Trachea
- (2) Bronchus
- (3) Pulmonary vasculature
- (4) All of the above

144. Which drug is not used for protection of brain and spinal cord during operation requiring circulatory arrest and clamping of the descending thoracic aorta ?

- (1) Methyl prednisolone
- (2) Calcium
- (3) Thiopentone
- (4) Naloxone



145. The artery of Adamkiewicz arises most commonly from

- (1) T<sub>5</sub> – T<sub>8</sub>
- (2) T<sub>9</sub> – T<sub>12</sub>
- (3) L<sub>1</sub> – L<sub>2</sub>
- (4) L<sub>2</sub> – L<sub>5</sub>

146. Which aortic aneurysms enlarges at the fastest rate ?

- (1) Abdominal aortic aneurysm
- (2) Thoracic aortic aneurysm
- (3) Aortic arch aneurysm
- (4) Ascending aorta aneurysm

147. Which statement is incorrect regarding acute aortic dissection ?

- (1) S.T. segment depression occurs commonly comparative to S.T. segment elevation.
- (2) D-Dimer is highly elevated.
- (3) Sensitivity and specificity of T.E.E. is more than 85%.
- (4) Thrombolysis can be given safely.

148. Which one of the following is not an extraanatomic bypass grafting ?

- (1) Aortofemoral bypass
- (2) Axillofemoral bypass
- (3) Femorofemoral bypass
- (4) Thoracofemoral bypass

149. Indication of Lumbar sympathectomy

- (1) Buerger's disease
- (2) Vasospastic disorder
- (3) Non-bypassable atherosclerotic occlusion
- (4) All of the above

150. Leriche's syndrome includes

- (1) Claudication in leg
- (2) Decreased sexual potency
- (3) Absence of femoral pulse
- (4) All of the above

151. For aortofemoral grafting which prosthetic graft is used ?

- (1) Dacron graft
- (2) P.T.E.E. graft
- (3) Biologically coated graft
- (4) All of the above

152. Profunda artery originates \_\_\_\_\_ below the inguinal ligament.

- (1) 1 – 3 cm
- (2) 3 – 5 cm
- (3) 5 – 7 cm
- (4) 7 – 9 cm

153. Which medical therapy is not useful for patients with claudication ?

- (1) Pentoxifyllina
- (2) Cilastazole
- (3) Xanthine Nicotinate
- (4)  $\beta$ -blockers

154. Chronic limb ischemia is defined by all except

- (1) Persistent recurring rest pain requiring opiate analgesia for more than 2 weeks.
- (2) Ankle systolic pressure lower than 50 mm Hg.
- (3) Toe systolic pressure lower than 30 mm Hg.
- (4) Claudication.

155. Claudication occurs at \_\_\_\_\_ ankle-brachial index.

- (1) More than 0.80
- (2) 0.40 to 0.80
- (3) 0.20 to 0.40
- (4) Less than 0.20

156. The most frequent site for thromboembolism

- (1) Cerebral artery
- (2) Brachial artery
- (3) Mesenteric artery
- (4) Femoral artery

157. Fogarty embolectomy catheters were popularized for acute thromboembolism during

- (1) 1960's
- (2) 1940's
- (3) 1980's
- (4) 1920's

158. Non-atheromatous cause of chronic infrainguinal limb ischemia is

- (1) Popliteal artery entrapment syndrome.
- (2) Adventitial cystic disease.
- (3) Pseudoxanthoma elastica.
- (4) All of the above.

159. Risk factor modification for non-operative management of peripheral vascular disease patients

- (1) Smoking cessation
- (2) Antiplatelet & statin therapy
- (3) Management of Hypertension and Diabetes
- (4) All of the above

160. Treatment of choice for Type A iliac lesion (T.A.S.C. classification)

- (1) Endovascular therapy
- (2) Surgery
- (3) Both of the above
- (4) None of the above

161. The most common cause of extracranial carotid artery is

- (1) Atherosclerosis
- (2) Fibromuscular dysplasia
- (3) Takayasu's arteritis
- (4) Arterial dissection

162. Gold standard diagnostic modality for atherosclerotic carotid disease is

- (1) Dopplar ultrasound
- (2) D.S.A.
- (3) M.R.A.
- (4) C.T.A.



163. S.V.C. syndrome is most commonly caused by

- (1) Malignant tumor compression
- (2) Fibrosing mediastinitis
- (3) Infectious masses
- (4) Iatrogenic causes secondary to indwelling catheters

164. Which is not a complete vascular ring ?

- (1) Double aortic arch.
- (2) Right aortic arch with retrooesophageal left subclavian artery.
- (3) Left aortic arch with retrooesophageal right subclavian artery.
- (4) Left aortic arch with right descending aorta with P.D.A.

165. Which is not a risk factor for the development of D.V.T. ?

- (1) Oral contraceptives
- (2) Immobility
- (3) Malignancy
- (4) Young age

166. Which drug can be given as oral direct thrombin inhibitor ?

- (1) Hirudin
- (2) Dabigatran
- (3) Bivalirudin
- (4) Argatroban

167. Follow-up of patients with peripheral vascular surgery on oral anticoagulants, done with monitoring of anticoagulation by

- (1) P.T./INR
- (2) a P.T.T.
- (3) Anti-Xa
- (4) Drug level in plasma

168. Which of the following drug does not potentiate the effect of oral anticoagulants ?

- (1) Rifampicin
- (2) Isoniazid
- (3) Erythromycin
- (4) Metronidazole

169. Triangle of Koch's is bounded by all except

- (1) Tricuspid annulus
- (2) Opening of coronary sinus
- (3) Tendon of todaro
- (4) Opening of IVC

170. R.C.A. supplies S.A. node and bundle in \_\_\_\_\_ % of cases.

- (1) 40
- (2) 60
- (3) 80
- (4) 100

171. Right fibrous trigone is in close relationship with these all except

- (1) Mitral and Tricuspid annuli
- (2) Membranous septum
- (3) Noncoronary cusp
- (4) Left coronary cusp

172. Profound systemic hypothermia (< 20° C) permits for how long duration of aortic occlusion and spinal cord ischemia in aortic surgery ?

- (1) < 60 min
- (2) < 80 min
- (3) < 100 min
- (4) < 120 min

173. Dose of heparin for Cardiopulmonary Bypass

- (1) 1-2 mg/kg
- (2) 3-4 mg/kg
- (3) 4-6 mg/kg
- (4) 6-8 mg/kg

174. Which is not used a buffer agent in Cardioplegia solution ?

- (1) THAM
- (2) Blood
- (3) Histidine
- (4) Mannitol

175. After going on cardiopulmonary bypass, heart is still full because of all except

- (1) Associated PDA
- (2) Associated LSVC
- (3) Improper position of IVC cannulae
- (4) Large size of venous cannulae

176. In retrograde cardioplegia infusion, coronary sinus pressure must not be allowed to rise above \_\_\_\_\_.

- (1) 30 mm Hg
- (2) 50 mm Hg
- (3) 70 mm Hg
- (4) 90 mm Hg

177. In a condition of heparin resistance, these can be used except

- (1) Kaolin
- (2) Bivalirudin
- (3) Increased dose of heparin
- (4) Hirudin

178. Which is correct regarding alpha stat strategy of CPB ?

- (1) Good for pediatric patients.
- (2) Results in increased cerebral blood flow.
- (3) Results in respiratory acidosis and hypercarbia.
- (4) Good for adult patients.

179. Management of HOCM are all except

- (1) Percutaneous transluminal injection of alcohol into septal branches of L.A.D.
- (2) D.D.D. Pacemaker
- (3) Septal myectomy
- (4)  $\beta$ -agonists

180. Ortner's syndrome can be found in

- (1) Mitral stenosis
- (2) Aortic stenosis
- (3) Pulmonary stenosis
- (4) Tricuspid stenosis



रफ कार्य के लिए स्थान / SPACE FOR ROUGH WORK

