



SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY

THIRUVANANTHAPURAM—695 011, INDIA.

(An Institute of National Importance under Govt. of India)

Phone—(91)0471—2443152 Fax—(91)0471—2446433, 2550728

Email-sct@sctimst.ac.in Web site—www.sctimst.ac.in

ROLL NUMBER

WRITTEN TEST FOR THE POST OF TECH. ASST. (CARDIOLOGY) – A TO B

DATE: 28/09/2023

TIME: 10 A.M To 11

DURATION: 60 MINUTES

Total Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Write your Roll Number on the top of the Question Booklet and in the answer sheet.
2. Each question carries 1 mark.
3. There will not be any Negative Marking.
4. Write legibly the alphabet of the most appropriate answer (A, B, C or D) in the separate answer sheet provided.
5. Over-writing is not permitted.
6. Candidate should sign in the question paper and answer sheet.
7. No clarifications will be given.
8. Candidate should hand over the answer sheet to the invigilator before leaving the examination hall.

Signature of the Candidate

Purpa Sreedhar
28/9/2023

Technical Assistant Cardiology A to B – 1 MFCP

1. Which of the following is NOT suggestive of abnormal ECG in a patient with arrhythmia?
 - a. QT
 - b. delta wave
 - c. T inversion
 - d. ST elevation in V1

2. Which of the following is NOT a marker of high cardiac risk
 - a. early return of heart rate to recovery after exercise
 - b. T wave alternans
 - c. altered heart rate recovery
 - d. rapid resting heart rate

3. Corrected Sinus node recovery time is -- msec:
 - a. 425
 - b. 525
 - c. 625
 - d. 725

4. Exercise testing is indicated in
 - a. symptomatic aortic stenosis
 - b. acute coronary syndrome
 - c. pregnant patient to assess exercise capacity prior to BMV
 - d. prognostication after MI

5. which of the following can be given after arterial access in patient likely to have PCI
 - a. abciximab
 - b. clopidogrel
 - c. heparin
 - d. streptokinase

6. LV angio is safe in patients with

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- a. severe heart failure
- b. left main disease
- c. renal failure
- d. evaluation of angina

7. Right heart cath is NOT done in patients with

- a. valvular heart disease
- b. chronic stable angina
- c. cardiomyopathy
- d. constrictive pericarditis

8. Which is FALSE regarding radial access in comparison to femoral

- a. haemostasis easier
- b. occlusion after access is better tolerated
- c. better comfort
- d. 0.032-inch guidewire used

9. Nonionic Contrast Agents

- a. have Monomer benzene rings
- b. have low Viscosity
- c. are high Osmolality
- d. produce fewer anaphylactoid reactions

10. Which of the following is least useful for LM ostium imaging

- a. RAO caudal
- b. AP caudal
- c. LAO cranial
- d. LAO caudal

11. Which is FALSE of radiation?

- a. there is no permissible level of radiation
- b. effect is cumulative

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- c. there is washout phenomenon
- d. ALARA principle should be followed

12. Which is TRUE of IABP?

- a. reduces oxygen demand
- b. reduces coronary blood flow
- c. deflates in systole
- d. LVEDP increases

13. Which is TRUE of FFR?

- a. normal is 1
- b. different values for different coronary arteries
- c. changes with heart rate
- d. affected by diabetes

14. In severe aortic stenosis, the mean gradient by echo is above – mmHg

- a. 25
- b. 30
- c. 35
- d. 40

15. which of the following percutaneous intervention is possible in TOF prior to total correction

- a. pulmonary valve replacement
- b. pulmonary artery stenting
- c. ICD
- d. VSD device closure

16. Speed of ultrasound through body tissues averages – m/sec

- a. 1440
- b. 1540
- c. 1640
- d. 1740

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17. Which is FALSE in principles of Doppler?

- a. most accurate when ultrasound beam is aligned parallel to the direction of blood flow
- b. Doppler frequency shift is dependent on the speed of ultrasound
- c. PW Doppler is primarily used to assess flow with high velocity
- d. Nyquist limit is the maximum velocity that can be quantified within a given sample volume

18. Which of the following are better seen by TTE than TEE?

- a. Left atrium
- b. Pulmonary veins
- c. Atrial septum
- d. Tricuspid valve

19. Pressure half time is NOT useful in which of the following?

- a. MS
- b. MR
- c. AR
- d. TS

20. Commonest complication after CAG is

- a. vascular
- b. haemodynamic
- c. arrhythmia
- d. MI

21. Radiation dose CANNOT be minimized by

- a. reduced acquisition time
- b. high magnification
- c. collimator beams and filters,
- d. avoid high angulation

22. Surface ECG will NOT show

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- a. atrial depolarization
- b. ventricular depolarization
- c. ventricular repolarization
- d. atrial repolarization

23. Which is TRUE of arterial pulse contours?

- a. Sharp peaks indicate rapid left ventricular ejection.
- b. increased pulse pressures are seen in patients with acute aortic regurgitation.
- c. Slowly rising systolic phases are seen in hypertrophic obstructive cardiomyopathy.
- d. low diastolic pressure suggest high peripheral resistance.

24. Starting at the APEX of the heart and moving superiorly, what is the correct order in which you would encounter the four anatomical structures below?

- a. atrio-ventricular valves, chordae tendinae, papillary muscle, ventricle
- b. ventricle, papillary muscle, chordae tendinae, atrio-ventricular valves
- c. papillary muscle, chordae tendinae, ventricle, atrio-ventricular valves
- d. chordae tendinae, atrio-ventricular valves, ventricle, papillary muscle

25. Which of the following can be intervened percutaneously

- a. sinus venosus ASD
- b. ostium primum ASD
- c. inlet VSD
- d. subpulmonic VSD

26. Which of the following is NOT part of the tetralogy of Fallot?

- a. Pulmonary stenosis
- b. VSD
- c. Right Ventricular hypertrophy
- d. Atrial septal defect

27. For routine 12 lead standard ECG recording the recommended filter settings for adults by professional groups

- a. 0.05 – 150 Hz
- b. 50 Hz

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- c. 1 – 30 Hz
- d. 0.5 – 50 Hz

28. The following electrode position and lead connection will obtain which ECG lead during routine 12 lead ECG recording-- Positive input – Right arm, Negative input -- left arm plus left leg

- a. aVR
- b. aVL
- c. III
- d. I

29. The standard Doppler technique used to measure blood flow velocity across a severely stenotic aortic valve (expected velocity > 4 metres /second) is

- a. Pulse wave Doppler
- b. Continuous wave Doppler
- c. Vector Doppler
- d. Tissue velocity Doppler

30. The ASD suitable for nitinol based device closure

- a. Primum ASD
- b. Sinus Venosus ASD
- c. Coronary Sinus ASD
- d. Secundum ASD

31. The type of ASD most commonly associated with anomalous drainage of pulmonary vein

- a. Primum ASD
- b. Sinus Venosus ASD
- c. Coronary Sinus ASD
- d. Secundum ASD

32. Which of the following tests is done to monitor effect of Heparin in cathlab

- a. ACT
- b. PT / INR
- c. APTT
- d. Ecarin Clotting time

33. Which of the following coronary physiology indices need Adenosine

- a. RFR
- b. FFR
- c. DPR

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d. DFR

34. What is the most likely saturation of blood sample from a normal subject obtained from Pulmonary artery

- a. 35%
- b. 45%
- c. 65%
- d. 95%

35. In a patient with muscular VSD with left to right shunt, the step-up in saturation will be seen in which chamber?

- a. Right atrium
- b. Right ventricle
- c. Pulmonary artery
- d. IVC

36. If a patient is found to have a 90% saturation in SVC, what is most likely

- a. PAPVC
- b. Unroofed coronary sinus
- c. RSOV to RV
- d. Muscular VSD

37. Rotational atherectomy (rotablation) is indicated in

- a. Heavily calcific lesion.
- b. Thrombus containing lesion.
- c. Short segment lesion in saphenous venous graft.
- d. In-stent restenosis

38. IVL – Intravascular lithotripsy is used to treat patients with

- a. Calcific coronary lesion
- b. Stent thrombosis
- c. Acute myocardial infarction
- d. Chronic total occlusion

39. What is the frequency of neonatal transthoracic echocardiography probe

- a. 10 MHz

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- b. 2,5 MHz
- c. 40 MHz
- d. 60 Mhz

40. Alcohol septal ablation is done for

- a. Restrictive cardiomyopathy
- b. Hypertrophic cardiomyopathy
- c. Arrhythmogenic cardiomyopathy
- d. Dilated cardiomyopathy

41. LV systolic Pressure is 220 mmHg, LVEDP – 12 mmhg Aortic pressure is 100 / 60 mmHg., Left atrial mean is 12 mmHg What is your diagnosis

- a. Severe Aortic stenosis
- b. Severe mitral stenosis
- c. Mild aortic stenosis
- d. Mild mitral stenosis

42. TAVR Valve which is developed in India is

- a. MyVal
- b. Sapiens valve
- c. EVOLUT-R
- d. LOTUS Valve

43. ADO I ductal occluder is made of what metal alloy

- a. Stainless steel
- b. Tungsten
- c. Nitinol
- d. Cobalt-Chromium

44. Which of the following coronary stents is a bivascular scaffold

- a. Resolute integrity.
- b. Promus Premiere
- c. MERES 100
- d. XIENCE

45. The strut thickness of currently available coronary stents is nearly

- a. 65 microns
- b. 140 microns

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- c. 200 microns
- d. 300 microns

46. The value of RFR (Resting Full Cycle ratio) which is used as cut off

- a. 0.80
- b. 0.85
- c. 0.89
- d. 1.00

47. The height of a patient planned for BMV is 160 cms. The Accura balloon which you chose ideally is

- a. 22 mm
- b. 24 mm
- c. 26 mm
- d. 28 mm

48. The angiographic projection used to close PDA is

- a. AP view
- b. Lateral view (90 degree)
- c. LAO Caudal (40/40)
- d. LAO Cranial (60/20)

49. Most commonest site of the tumor - cardiac myxoma

- a. Right atrium
- b. Right ventricle
- c. Left atrium
- d. Left ventricle

50. The agent / drug used to study pulmonary hypertension in cathlab

- a. Nitric Oxide
- b. Nitrous Oxide
- c. Isosorbide dinitrate
- d. Isosorbide mononitrate

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Technical Assistant Cardiology A to B

Q.NO	Ans	Q.NO	Ans	Q.NO	Ans	Q.NO	Ans	Q.NO	Ans
1	c	2	a	3	b	4	d	5	a
6	d	7	b	8	c	9	d	10	a
11	c	12	a	13	a	14	d	15	b
16	b	17	c	18	d	19	b	20	a
21	b	22	d	23	a	24	b	25	a
26	d	27	a	28	a	29	b	30	d
31	b	32	a	33	b	34	c	35	b
36	a	37	a	38	a	39	a	40	b
41	a	42	a	43	c	44	c	45	a
46	c	47	c	48	b	49	c	50	a

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