Version No.			

ROLL NUMBER						

Answer Sheet No._____

Sign. of Candidate _____

Sign. of Invigilator _____

Cardiovascular Technology HSSC–I

SECTION – A (Marks 20)

Time allowed: 25 Minutes

Section – A is compulsory and comprises pages 1-2. All parts of this section are to be answered on the question papers itself. It should be completed in the first 25 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. **Do not use lead pencil.**

Q.1 Circle the correct option i.e. A / B / C / D. Each part carries one mark.

(1) The only veins in the body which carries oxygenated blood is:

A. Subclavian Vein ◯ B. Carotid Vein ◯

C. Pulmonary Vein ◯ D. Radial Vein ◯

(2) List three major coronary arteries:

A. RCA, RCA marginal branch, and Left marginal branch ◯

B. Aorta, Aortic Arch, and pulmonary arteries ◯

C. LAD, LCX, and RCA ◯

D. SA node, AV node, and Bundle of His ◯

(3) What is Cardiac Output:

A. Normal Heart rate ◯ B. Stoke Volume ◯

C. Amount of blood ejected from a ventricle with each heart beat ◯

D. Amount of blood pumped into the aorta each minute by the heart ◯

(4) This is the classic ECG change in MI (myocardial infarction):

A. ST-segment elevation ◯ B. T-wave inversion ◯

C. Three up two down ◯ D. Three up one down ◯

(5) A normal ECG report must consist of the following information:

A. Rhythm, cardiac axis ◯ B. Conduction intervals ◯

C. Description of the ST segments, QRS complexes, T-waves ◯

D. All of these type ◯

(6) P wave indicates:

A. Depolarization of right ventricle ◯

B. Depolarization of left ventricle ◯

C. Depolarization of both atria ◯

D. Atria to ventricular conduction time ◯

(7) Ventricular muscle depolarization is indicated by:

A. PR interval ◯ B. P wave ◯

C. U wave ◯ D. The QRS complex ◯

(8) In human being the duration of cardiac cycle is:

A. 0.008 sec ◯ B. 0.5 sec ◯

C. 0.8 sec ◯ D. 8 sec ◯

(9) The QRS Complex of the ECG represents:

A. Ventricular depolarization ◯ B. Atrial depolarization ◯

C. Ventricular repolarization ◯ D. Atrial systole ◯

(10) The two distinct heart sounds during the cardiac cycle:

A. Lub ◯ B. Dub ◯

C. Murmur ◯ D. A & B ◯

(11) Bradycardia is called heart rate below:

A. 60 beats per minute ◯ B. 80 beats per minutes ◯

C. 100 beats per minutes ◯ D. 70 beats per minutes ◯

(12) Coronary arteries supplies:

A. Kidneys ◯ B. Lungs ◯

C. Heart ◯ D. Stomach ◯

(13) The mitral valve is the other name of:

A. Tricuspid ◯ B. Bicuspid Valve ◯

C. Pulmonary Valve ◯ D. Aortic Valve ◯

(14) What is Normal Blood pressure:

A. 120/80 mmHg ◯ B. 170/80 mmHg ◯

C. 150/100 mmHg ◯ D. 100/60 mmHg ◯

(15) Cardiac output is determined by:

A. Heart rate ◯ B. Stroke volume ◯

C. Blood flow ◯ D. Heart rate and stroke volume ◯

(16) The cardiac muscle of the heart is the:

A. Epicardium ◯ B. Endocardium. ◯

C. Pericardium. ◯ D. Myocardium ◯

(17) The blood vessels with venous blood proceeding from the right ventricle to the lungs are the:

A. Vena cava. ◯ B. Aorta ◯

C. Pulmonary arteries. ◯ D. Pulmonary veins ◯

(18) The blood pressure can be measured using a:

A. Sphygmomanometer. ◯ B. Barometer. ◯

C. Spirometer. ◯ D. Thermometer. ◯

(19) The reason why tricuspid and bicuspid valves are closed is:

A. Ventricular relaxation. ◯ B. Ventricular filling. ◯

C. Atrial systole ◯

D. Prevent backflow of blood into the atria ◯

(20) The tricuspid valve is present between:

A. Ventricle and pulmonary artery. ◯

B. Ventricle and aorta ◯

C. Left auricle and left ventricle ◯

D. Right auricle and right ventricle ◯

Federal Board HSSC-I Examination
Cardiovascular Technology

Time allowed: 2:35 hours Total Marks Section B and C: 80

Note: Answer any twenty five parts from Section 'B' and attempt any three questions from Section 'C' on the separately provided answer book. Write your answers neatly and legibly.

SECTION – B (Marks 50)

Q.2 Attempt any **TWENTY FIVE** parts from the following. All parts carry equal marks. Be brief and to the point. (25 × 2 = 50)

1. Enlist the indication of ECG.
2. What is Cardiac output, write its normal value.
3. Write Indication of tilt test.
4. What is holters monitoring. Discuss briefly
5. Discuss between right heart and left heart.
6. Define surface anatomy of the heart
7. What is the function of the valves.
8. Where is SA node located?
9. Write the components of conducting system of the heart.
10. What is stroke volume?
11. Write the causes of myocardial infarction
12. Write the position of the ECG electrodes
13, Discuss heart sounds.
14. Write difference between pulmonary and general circulation.
15. Write names of the cardiac chambers and valves
16. Define bradycardia and tachycardia
17. Discuss venous return.
18. Write the blood supply of heart.
19. Write the contents of thoracic cavity.
20. What is normal PR interval and QT interval
21. Name the parts of Aorta
22. Discuss position of the heart
23. What is mediastinum? Discuss briefly.

24. What is the position of AV node.
25. Define Preload
26. What are the effects of exercise on human heart?
27. Why were perform ambulatory BP monitoring.
28. Write short note on Preparation of tilt test.
29. Name the different types of arrhythmias
30. What is Ejection fraction.
31. Discuss cardiac muscle cells.
32. Name the layers of heart
33. Name the valves of the heart.

SECTION – C (Marks 30)

Note: Attempt any **THREE** questions. All questions carry equal marks. (3×10 = 30)

Q.3 What is cardiac cycle, Discuss its systolic and diastolic phases in detail.

Q.4 Discuss the Blood circulation through the heart.

Q.5 Discuss in detail Anatomy of heart.

Q.6 What is electrocardiogram, write the steps for preparation of it?

Q.7 What is invasive blood pressure monitoring? Discuss in detail.

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