

PROVISIONAL ANSWER KEY

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Question1:-A zoologist identifies an animal with similar body parts arranged around a central axis and no distinct left or right side.
The animal most likely exhibits :

A:-Bilateral symmetry

B:-Asymmetry

C:-Radial symmetry

D:-Metamerism

Correct Answer:- Option-C

Question2:-Match the following items in column - I with those in column - II

Column - I	Column - II
P. Lysosome	1. Packaging
Q. Golgi apparatus	2. Intracellular digestion
R. Vacuole	3. Storage and turgidity

Choose the correct option

A:-P-2, Q-1, R-3

B:-P-1, Q-2, R-3

C:-P-3, Q-1, R-2

D:-P-2, Q-3, R-1

Correct Answer:- Option-A

Question3:-Which observation best supports the fluid mosaic model of plasma membrane?

A:-Presence of cellulose in membrane

B:-Proteins remain fixed permanently

C:-Lipids and proteins can move laterally

D:-Membrane contains only phospholipids

Correct Answer:- Option-C

Question4:-Two cells, X and Y, are studied. The observations are given below.

X has a cell wall and chloroplasts.

Y lacks cell wall and chloroplasts.

Which conclusion is valid?

A:-X is animal cell; Y is bacterial cell

B:-X is plant cell ; Y is animal cell

C:-X is fungal cell ; Y is plant cell

D:-Both are prokaryotic cells

Correct Answer:- Option-B

Question5:-Which sequence correctly represents the pathway of a secretory protein in a eukaryotic cell. (ER = Endoplasmic Reticulum)

A:-Ribosome → ER → Golgi apparatus → Plasma membrane

B:-ER → Ribosome → Lysosome → Nucleus

C:-Golgi apparatus → Nucleus → Ribosome → ER

D:-Plasma membrane → ER → Mitochondria → Ribosome

Correct Answer:- Option-A

Question6:-Consider the following statements regarding ribs :

(i) All ribs are directly attached to the sternum.

(ii) Floating ribs do not attach to the sternum.

(iii) True ribs are attached to the sternum through cartilage.

Which statements are correct?

A:-(i) and (ii) only

B:-(ii) and (iii) only

C:-(i) and (iii) only

D:-(i), (ii) and (iii)

Correct Answer:- Option-B

Question7:-Which sequence, given below, correctly represents the vertebral regions from the uppermost part to the lower-most part of vertebral column?

A:-Cervical → Thoracic → Lumbar → Sacral → Coccygeal

B:-Lumbar → Cervical → Thoracic → Sacral → Coccygeal

C:-Thoracic → Cervical → Sacral → Lumbar → Coccygeal

D:-Cervical → Sacral → Thoracic → lumbar → Coccygeal

Correct Answer:- Option-A

Question8:-Which arrangement correctly represents the components forming the thoracic cage?

A:-Ribs, Sternum and Thoracic vertebrae

B:-Clavicle, Scapula and humerus

C:-Pelvic girdle and lumbar vertebrae

D:-Sternum, femur and ribs

Correct Answer:- Option-A

Question9:-A toxin in snake venom blocks potassium channels in neurons immediately after depolarisation. Which phase of electrical activity will be most directly affected?

A:-Resting phase

B:-Repolarisation

C:-Synaptic transmission

D:-Synaptic vesicle formation

Correct Answer:- Option-B

Question10:-A patient shows absence of P-wave in ECG recording. Which cardiac event is most likely directly affected?

A:-Ventricular Repolarisation

B:-Closure of semilunar Valves

C:-Closure of bicuspid valves and tricuspid valves

D:-Atrial depolarisation

Correct Answer:- Option-D

Question11:-The heart is enclosed in a double-walled sac called :

A:-Perimysium

B:-Myocardium

C:-Peritoneum

D:-Pericardium

Correct Answer:- Option-D

Question12:-Which of the following is known as 'mitral valve'?

A:-Semilunar valve

B:-Right atrioventricular valve

C:-Left atrioventricular valve

D:-Aortic valve

Correct Answer:- Option-C

Question13:-The first heart sound is produced by

A:-Closure of pulmonary valve

B:-Closure of atrioventricular valves

C:-Closure of semilunar valves

D:-Closure of aortic valve

Correct Answer:- Option-B

Question14:-Which one of the following is not true about cardiac muscle?

A:-Cardiac muscle is self-excitatory

B:-Cardiac muscle contains less mitochondria and glycogen granules

C:-Cardiac muscle undergoes aerobic metabolism

D:-Cardiac muscle cells are joined end to end by thick connections called intercalated discs

Correct Answer:- Option-B

Question15:-The sinoatrial node is located in the :

A:-Right Atrium

B:-Left ventricle

C:-Right ventricle

D:-Left Atrium

Correct Answer:- Option-A

Question16:-The duration of cardiac cycle is :

A:-0.2 seconds

B:-0.4 seconds

C:-0.6 seconds

D:-0.8 seconds

Correct Answer:- Option-D

Question17:-The function of coronary artery is :

A:-Carries oxygenated blood to heart

B:-Carries oxygenated blood to brain

C:-Carried deoxygenated blood from heart

D:-Carries deoxygenated blood from lungs

Correct Answer:- Option-A

Question18:-Tricuspid and bicuspid valves are attached to the papillary muscles on the floor of the ventricle by

A:-Conus arteriosus

B:-Columnae carnae

C:-Chordae tendineae

D:-Choroid plexuses

Correct Answer:- Option-C

Question19:-Which of the following statement is/are true?

- (I) Systolic pressure is the peak arterial blood pressure attained during ventricular contraction
- (II) The diastolic pressure in an adult human is 120 mm Hg
- (III) The pressure in pulmonary vein is called pulse pressure
- (IV) Blood pressure is influenced by cardiac output and blood volume

A:-I & II only

B:-I & IV only

C:-II & III only

D:-II & IV only

Correct Answer:- Option-B

Question20:-Pick out the correct statement

A:-Human heart is neurogenic

B:-Ventricles are thin-walled chambers

C:-The right auricle receives deoxygenated blood

D:-The left ventricle arises an artery known as pulmonary artery

Correct Answer:- Option-C

Question21:-Abnormal increase in heart rate is known as :

A:-Bradycardia

B:-Tachycardia

C:-Hypokalemia

D:-Hyperkalemia

Correct Answer:- Option-B

Question22:-Sphygmomanometer is used to measure :

A:-Pulse rate

B:-Heart beat

C:-Blood pressure

D:-Electrical activity of heart

Correct Answer:- Option-C

Question23:-The average weight of human heart

A:-100 g

B:-180 g

C:-210 g

D:-300 g

Correct Answer:- Option-D

Question24:-The pulmonary vein carries :

A:-Oxygenated blood from lungs to heart

B:-Oxygenated blood from heart to lungs

C:-Deoxygenated blood from lungs to heart

D:-Deoxygenated blood from heart to lungs

Correct Answer:- Option-A

Question25:-Tunica adventitia of arteries made up of :

A:-Connective tissue

B:-Smooth muscle

C:-Endothelium

D:-Fibrous tissue

Correct Answer:- Option-A

Question26:-Which of the following chamber receives oxygenated blood from lungs?

A:-Right atrium

B:-Left atrium

C:-Left ventricle

D:-Right ventricle

Correct Answer:- Option-B

Question27:-The position of tricuspid valve is between :

A:-Right atrium and right ventricle

B:-Left atrium and left ventricle

C:-Left ventricle and aorta

D:-Right ventricle and pulmonary trunk

Correct Answer:- Option-A

Question28:-Normal value of stroke volume of adult human heart is :

A:-55 ml

B:-60 ml

C:-70 ml

D:-80 ml

Correct Answer:- Option-C

Question29:-Foramen ovale is a small opening :

A:-In the interventricular septum of adult heart

B:-In the base of AV bundle

C:-In the interatrial septum of foetal heart

D:-In the wall of right auricle

Correct Answer:- Option-C

Question30:-Study of blood vessel is called :

A:-Cardiology

B:-Angiology

C:-Pulmonology

D:-Haematology

Correct Answer:- Option-B

Question31:-Purkinje fibres are found in _____

A:-Auricles

B:-Tricuspid valve

C:-Ventricles

D:-Carotid artery

Correct Answer:- Option-C

Question32:-Which of the following statement is/are true?

(I) The 'pace setter' of the heart in man is AV node

(II) Acetylcholine has inhibitory action on the SA node resulting in fewer heart beats

(III) Depolarization of SA node is mainly due to influx of calcium ions

A:-I & II only

B:-I & III only

C:-II & III only

D:-All of the above

Correct Answer:- Option-C

Question33:-The cardiac output consists of :

A:-The amount of blood pumped out of each ventricle in one minute

B:-The amount of blood pumped out of each auricle in one minute

C:-The amount of blood pumped out of aorta in one minute

D:-The amount of blood pumped out of pulmonary trunk in one minute

Correct Answer:- Option-A

Question34:-In the cardiac conduction system, conduction velocity of impulses is maximum in :

A:-AV node

B:-Bundle of His

C:-Purkinje fibres

D:-Internodal fibres

Correct Answer:- Option-C

Question35:-The alternate expansion and elastic recoil of an artery with each systole of the left ventricle is called :

A:-Stroke volume

B:-Pulse

C:-Peripheral resistance

D:-Auscultation

Correct Answer:- Option-B

Question36:-Exercise stress test is most helpful in the diagnosis of

A:-Valvular Heart Disease

B:-Coronary Artery Disease

C:-Atrial Fibrillation

D:-Congenital heart disease

Correct Answer:- Option-B

Question37:-Significant findings during Treadmill Test

A:- Normal Blood pressure

B:-High Blood Pressure

C:-Low Blood Pressure

D:-Low oxygen saturation

Correct Answer:- Option-C

Question38:-Holter test is indicated in

A:-Unstable Angina

B:-Myocardial Infarction

C:-Syncope

D:-Exertional breathlessness

Correct Answer:- Option-C

Question39:-Exercise Stress Test is contraindicated in

A:-Pregnancy

B:-Hypertension

C:-Acute coronary syndrome

D:-Kidney disease

Correct Answer:- Option-C

Question40:-Implantable loop recorder has a life span of

A:-1-3 years

B:-1 week

C:-24 hours

D:-5 days

Correct Answer:- Option-A

Question41:-Cardiac monitors use

A:-to assess rate and rhythm of the heart

B:-continuous display of ECG

C:-monitor blood pressure

D:-All of the above

Correct Answer:- Option-D

Question42:-Echocardiogram common indication

A:-to assess Left ventricular function

B:-To monitor Blood pressure

C:-To check for arrhythmias

D:-Pleural effusion

Correct Answer:- Option-A

Question43:-Transesophageal echocardiography is particularly valuable to assess all except

A:-Prosthetic valve

B:-Atrial Septal Defect

C:-Aortic dissection

D:- Mitral stenosis

Correct Answer:- Option-D

Question44:-Left Heart catheterisation has complication risk of less than

A:-1 in 10 cases

B:-1 in 20 cases

C:-1 in 50 cases

D:-1 in 1000 cases

Correct Answer:- Option-D

Question45:-Implantable cardiac Defibrillators improve survival in

A:-Atrial Fibrillation

B:-Bradycardia

C:-Sinus pause

D:-Ventricular Tachycardia

Correct Answer:- Option-D

Question46:-Swan-Ganz balloon catheter are used to monitor

A:-Pulmonary wedge pressure

B:-Oxygen saturation

C:-Blood pressure

D:-Acid - base balance

Correct Answer:- Option-A

Question47:-Dual chamber pacemaker implantation indicated in

A:-First degree heart block

B:-second degree AV block

C:-Tachycardia

D:-Heart attack

Correct Answer:- Option-B

Question48:-Defibrillation is administered with biphasic shock

A:-150 J

B:-500 J

C:-600 J

D:-800 J

Correct Answer:- Option-A

Question49:-Temporary pacemaker is indicated

A:-Transient AV block

B:-Coma

C:-LBBB

D:-RBBB

Correct Answer:- Option-A

Question50:-Cardiac resynchronisation therapy

A:-treatment in selective heart failure patients

B:-treat atrial fibrillation

C:-treatment in bradycardia

D:-treatment in tachycardia

Correct Answer:- Option-A

Question51:-Treatment of Non ST elevation MI

A:-Streptokinase

B:-Tenecteplase

C:-Alteplase

D:-Heparin

Correct Answer:- Option-D

Question52:-Sinus arrhythmia is

A:-phasic alteration of heart rate during respiration

B:-heart rate below 60/minute

C:-Narrow complex QRS

D:-heart rate greater than 100/minute

Correct Answer:- Option-A

Question53:-Mitral stenosis murmur

A:-Ejection systolic murmur

B:-Mid diastolic murmur

C:-Early diastolic murmur

D:-Pansystolic murmur

Correct Answer:- Option-B

Question54:-Characteristic ECG change in Acute myocardial Infarction

A:-T inversion

B:-ST elevation

C:-PR prolongation

D:-upright T wave.

Correct Answer:- Option-B

Question55:-Commonest cause of valvular heart disease

A:-Coronary Heart Disease

B:-Infective Endocarditis

C:-Rheumatic fever

D:-Storage disorders

Correct Answer:- Option-C

Question56:-Based on function, The ECG machine is an example of

A:-Therapeutic equipment

B:-Diagnostic equipment

C:-Life support equipment

D:- Laboratory equipment

Correct Answer:- Option-B

Question57:-In an ECG, arrhythmia refers to

A:-High blood pressure

B:-Abnormal rate or rhythm

C:-Blockage of artery

D:-Enlargement of heart chambers

Correct Answer:- Option-B

Question58:-QRS complex of an ECG wave represents to

A:-Ventricular repolarisation

B:-Atrial repolarisation

C:-Depolarisation of ventricles

D:-Depolarisation of artery

Correct Answer:- Option-C

Question59:-Standard ECG calibration produces 10 mm amplitude at a voltage of

A:-1 mV

B:-10 mV

C:-1 V

D:-10 V

Correct Answer:- Option-A

Question60:-The difference between 6 Channel ECG machine and 12 Channel ECG machine is

A:-6 Channel records only 6 leads while 12 channel records all 12 leads at a time

B:-6 Channel prints 6 leads while 12 channel prints 12 leads simultaneously.

C:-6 channel uses 6 electrode 12 channel uses 12 electrodes

D:-6 channel is manual and 12 channel is automatic

Correct Answer:- Option-B

Question61:-P, Q, R, S, T, U are the major waves in ECG waveform. Out of this which have high amplitude

A:-P

B:-Q

C:-R

D:-S

Correct Answer:- Option-C

Question62:-The resulting tracing of voltage difference at any two sites over heart due to electrical activity of the heart is called a _____

A:-Lead

B:-Record

C:-Pole

D:-None of above

Correct Answer:- Option-A

Question63:-In standard Lead 1, the electrodes are placed on which area

A:-RA and LA

B:-LL and LA

C:-RA and LL

D:-RA and LA

Correct Answer:- Option-A

Question64:-In thermal paper used for ECG machine. What technology is used to print the ECG tracing?

A:-Ink from stylus

B:-Laser printing

C:-Dot matrix printing

D:-Heat from stylus

Correct Answer:- Option-D

Question65:-In an ECG machine the electrode placed on which part of the body is considered as the ground

A:-Right Arm

B:-Left Leg

C:-Left Arm

D:-Right Leg

Correct Answer:- Option-D

Question66:-The colour coding of ECG lead of Right Arm in International Electro Technical committee (IEC) system is

A:-Blue

B:-Green

C:-Black

D:-Red

Correct Answer:- Option-D

Question67:-Damping in ECG machine prevents

A:-Over voltage

B:-Overshooting and vibration of stylus

C:-Over paper speed and printing

D:-Over muscle contractions

Correct Answer:- Option-B

Question68:-Which wave represents atrial depolarization in ECG?

A:-QRS complex

B:-T wave

C:-P wave

D:-R wave

Correct Answer:- Option-C

Question69:-Select the correct statement which satisfies Einthoven's Law.

A:-Lead I + Lead II = Lead III

B:-Lead I + Lead III = Lead II

C:-Lead II + Lead III = Lead I

D:-Lead I - Lead III = Lead II

Correct Answer:- Option-B

Question70:-Which of the following is the period for one complete ventricular contraction in ECG ?

A:-Q-T interval

B:-P-R interval

C:-R-R interval

D:-S-T interval

Correct Answer:- Option-A

Question71:-There is no relation between the rhythm of the P waves and that of QRS - T complexes. This condition is known as:

A:-First degree A-V block

B:-Third degree A-V block

C:-Second degree A-V block

D:-None of these

Correct Answer:- Option-B

Question72:-Normal width of QRS complex is:

A:-0.05 to 0.10 S

B:-0.20 to 0.50 S

C:-> 0.30 S

D:-0.01 to 0.04 S

Correct Answer:- Option-A

Question73:-Irregular trembling of ECG trace without wandering of the baseline is caused by :

A:-Interference from the power line

B:-Muscle tremor

C:-Movement of electrodes

D:-Defibrillator interference

Correct Answer:- Option-B

Question74:-Name of the alloy used for making limb electrodes in ECG.

A:-Babbit Metal

B:-Pewter

C:-German Silver

D:-Zamak

Correct Answer:- Option-C

Question75:-Identify the horizontal plane ECG lead.

A:-Bipolar limb leads

B:- Precordial leads

C:-Augmented Unipolar limb leads

D:-Both (1) and (3)

Correct Answer:- Option-B

Question76:-Which ECG change is observed in the ECG of a person with Atrial Paroxysmal Tachycardia ?

A:-Sudden increase in the heart rate

B:-Inverted P wave

C:-P wave partially imposed on T wave

D:-All of the above

Correct Answer:- Option-D

Question77:-In a normal recording of augmented unipolar limb leads, which lead has inverted recording?

A:-aVR

B:-aVL

C:-aVF

D:-Both aVR and AVL

Correct Answer:- Option-A

Question78:-Identify the ECG change associated with Hypokalemia.

A:-Shortened P-R interval

B:-Tall tented T waves

C:-Prominent U wave

D:-All of the above

Correct Answer:- Option-C

Question79:-In a 12-lead ECG, where is the V₂ electrode correctly placed?

A:-Fourth intercostal space, at right sternal margin

B:-Fifth intercostal space, at midclavicular line

C:-Fourth intercostal space, at midclavicular line

D:-Fourth intercostal space, at left sternal margin

Correct Answer:- Option-D

Question80:-While recording the Augmented unipolar limb lead aVL, positive terminal of the electrocardiograph is connected to :

A:-Left Arm

B:-Right Leg

C:-Left Leg

D:-Left Arm + Left Leg

Correct Answer:- Option-A

Question81:-What is the next step in Adult basic life support in an unresponsive patient with no breathing and pulse not felt within 10 seconds ?

A:-Recheck pulse after 2 minutes.

B:-Monitor until advance care arrives.

C:-Start CPR immediately.

D:-Wait for defibrillator before starting CPR.

Correct Answer:- Option-C

Question82:-Which of the following is not a sign of Foreign Body Airway Obstruction ?

A:-Weak or absent cough

B:-Excessive speaking

C:-Cyanosis

D:-Apnea

Correct Answer:- Option-B

Question83:-Which of the following is not recommended in opening the airway in adult cardiac arrest ?

A:-Cricoid pressure

B:-Head tilt - chin lift maneuver

C:-Nasopharyngeal airway

D:-Oropharyngeal airway

Correct Answer:- Option-A

Question84:-Which of the following is not true regarding defibrillation in adult cardiac arrest?

A:-Defibrillators are recommended to treat tachyarrhythmias requiring shock such as Ventricular fibrillation or pulseless Ventricular tachycardia

B:-Monophasic waveform defibrillation is preferred over Biphasic waveform defibrillation.

C:-A single shock strategy is preferred to stacked shock for defibrillation

D:-When a manufacturer's specified setting is unknown, use the maximum dose setting for that device

Correct Answer:- Option-B

Question85:-Which is true regarding administration of vasopressor in cardiac arrest?

A:-Administration of epinephrine is not recommended for adult patients in cardiac arrest

B:-It is reasonable to administer 1 mg of epinephrine every 30 minutes for adult patients in cardiac arrest.

C:-Vasopressin has advantage as substitute for epinephrine in adult patients in cardiac arrest.

D:-High dose epinephrine is not recommended for routine use for adult patients in cardiac arrest.

Correct Answer:- Option-D

Question86:-The length of bony part of external auditory canal is

A:-8 mm

B:-24 mm

C:-16 mm

D:-10 mm

Correct Answer:- Option-C

Question87:-Conductive hearing loss is caused by

A:-Ototoxic drugs

B:-Acoustic neuroma

C:-Meniere's disease

D:-Perforation of tympanic membrane

Correct Answer:- Option-D

Question88:-Intensity of normal conversation is

A:-90 dB

B:-30 dB

C:-60 dB

D:-120 dB

Correct Answer:- Option-C

Question89:-Sensory epithelium of utricle is called

A:-Organ of corti

B:-Macula

C:-Cupula

D:-Crista

Correct Answer:- Option-B

Question90:-Masking in pure tone audiogram is done using

A:-Narrow band noise

B:-White noise

C:-Speech noise

D:-None of the above

Correct Answer:- Option-A

Question91:-The intake of which nutrient should be DECREASED to reduce heart disease risk?

A:-Fiber

B:-Saturated fat

C:-Vitamins

D:-Potassium

Correct Answer:- Option-B

Question92:-Which of the following is NOT a risk factor for heart disease?

A:-Smoking

B:-High-fat diet

C:-Regular exercise

D:-High blood pressure

Correct Answer:- Option-C

Question93:-Which of the following tests is NOT REQUIRED in a person presenting with acute chest pain with pain spreading towards left arm?

A:-Endoscopy

B:-Electrocardiogram (ECG)

C:-Echocardiography

D:-Blood test (Troponin)

Correct Answer:- Option-A

Question94:-Which among the following pathogens is implicated in valvular involvement in Rheumatic heart disease?

A:-Bacteria

B:-Fungi

C:-Virus

D:-Protozoa

Correct Answer:- Option-A

Question95:-Which among the following is the LEAST LIKELY symptom in a patient with heart disease?

A:-Difficulty in breathing

B:-Feeling of increased heart rate

C:-Abdominal distension

D:-Swelling of legs

Correct Answer:- Option-C

Question96:-Which among the following statements regarding obesity is WRONG?

A:-Global obesity prevalence among adults is around 16.1%

B:-Men are more affected by obesity than women

C:-High body mass Index contributes to around 7% of deaths in the world population

D:-Around 40% of the world's adult women are either overweight or obese

Correct Answer:- Option-B

Question97:-Which of the following infections in the mother contributes to heart defects in the baby?

A:-Dengue

B:-Rubella

C:-Chikungunya

D:-COVID 19

Correct Answer:- Option-B

Question98:-The risk of heart disease is increased in all the following situations EXCEPT?

- A:-Daily consumption of alcohol
- B:-Family history of heart disease
- C:-Eating fruits daily
- D:-Stress

Correct Answer:- Option-C

Question99:-Body mass Index is calculated as Weight/Square of Height. Which among the following is the CORRECT unit for measurements used?

- A:-Weight in Kilograms, height in inches
- B:-Weight in pounds, height in feet
- C:-Weight in Kilograms, height in meters
- D:-Weight in grams, height in inches

Correct Answer:- Option-C

Question100:-Which type of cholesterol is often referred to as "bad cholesterol"?

- A:-High density Lipoprotein (HDL)
- B:-Apolipoprotein a
- C:-Very Low density Lipoprotein (VLDL)
- D:-Low density Lipoprotein (LDL)

Correct Answer:- Option-D