



# BIOLOGY

## NEET & AIIMS

### MOCK TEST 09 ZOOLOGY

#### Example

1. Which of the following statements is incorrect regarding circulatory system of fishes?

- A. Fishes have two chambered heart with an atrium and a ventricle
- B. Only deoxygenated blood is pumped through their heart
- C. Mixing of oxygenated and deoxygenated blood occurs in ventricle
- D. Oxygenation of blood occurs at gills

**Answer: C**



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2. Which of the following is not a part of circulatory system of human?

A. Heart

B. Blood vessels

C. Sinuses

D. Blood

**Answer: C**



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3. Which of the following is a correct match regarding valves and their respective location?

A. Tricuspid valve (Valves) - Aorta (Location)

B. Mitral valve (Valves) - Between left atrium and left ventricle (Location)

C. Bicuspid valve (Valve) - Between right atrium and right ventricle (Location)

D. Semilunar valve (Valves) - Between left and right atrium (Location)

**Answer: B**



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4. Which of the following structures prevents atrioventricular valves from reverting into atria during ventricular contraction?

A. Chordae tendine

B. Purkinje fibers

C. Bundle of His

D. Columnae carnae

**Answer: A**



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5. Find the odd one among the following blood vessels w.r.t. the blood (deoxygenated or oxygenated ) which is carried by them?

A. Pulmonary artery

B. Pulmonary vein

C. Coronary veins

D. Vena cava

**Answer: B**



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**6.** Consider the following statements?

(a) Before birth, foramen ovale allows the blood to pass from right atrium to left atrium , thus bypassing the pulmonary circulation ,

(b) Heart is protected by a double walled pericardium ,

(c) The muscle fibres present in heart are different from smooth muscles in being mesodermal in origin ,

(d) Nodal tissues like AVN, SAN are specialised

neural tissues which are distributed in heart.

How many among the statements mentioned above are correct?

A. Two

B. Three

C. One

D. Four

**Answer: A**



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7. Which of the following structure in the normal human heart generates action potential to initiate a cardiac cycle ?

A. SA node

B. AV node

C. Purkinje fibres

D. Bundle of His

**Answer: A**



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8. During which of the following of the following events of cardiac cycle, AV valves remain closed?

- A. Atrial systole
- B. Ventricular systole
- C. Ventricular diastole
- D. Joint diastole

**Answer: B**



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**9. Match the columns :**

(a) Atrial systole (Column I) .....(i) 0.7 seconds  
(Column II) ,

(b) Joint diastole (Column I)..... (ii) 0.3 seconds  
(Column II)

(c) Ventricular systole (Column I)..... (iii) 0.1  
second (Column II) ,

(d) Atrial diastole (Column I)..... (iv) 0.4  
seconds (Column II)

A. a(iii) , b(iv), c(ii), d(i)

B. a(iv), b(iii), c(ii), d(i)

C. a(iii), b(iv), c(i), d(ii)

D. a(i), b(ii), c (iii), d(iv)

**Answer: A**



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**10. Select the correct statement :**

A. Blood flow to the ventricles increases by 70% during atrial systole

B. Decline in ventricular pressure leads to opening of semilunar valves

C. Amount of blood pumped by ventricles during a cardiac cycle is known as cardiac output

D. Our body has ability to alter stroke volume as well as cardiac output

**Answer: D**



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11. Rise in ventricular pressure during ventricular systole leads to closure of atrioventricular valves which generates

- A. Lub sound
- B. Dub sound
- C. Third heart sound
- D. Heart murmurs

**Answer: A**



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12. Which of the following is correct representation of flow of action potential through conduction system of heart?

A. AV node rarr SA node rarr Bundle of His  
rarr Purkinje fibres

B. SA node rarr AV node rarr Purkinje fibres  
rarr Bundle of His

C. AV node rarr Bundle of His rarr SA node  
rarr Purkinje fibres

D. SA node rarr AV node rarr Bundle of His  
rarr Purkinje fibres

**Answer: D**



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**13.** Statement A : ECG represents electrical activity of heart during a cardiac cycle.

Statement B : Electrocardiograph is obtained using electrocardiogram machine.



A. Both statements are correct

B. Statements A is correct and B is incorrect

C. Statements A is incorrect and B is correct

D. Both statements are incorrect

**Answer: B**



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14. Which of the following changes in ECG indicates that a person is having a heart attack?

- A. Enlargement of P-wave
- B. Depressed S-T segment
- C. Elevated S-T segment
- D. Flat T -wave

**Answer: C**



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15. Which of the following is not a component of pulmonary circulation?

- A. Pulmonary vein
- B. Pulmonary artery
- C. Aorta
- D. Heart

**Answer: C**



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**16.** The hepatic portal vein carries blood from A to B before it is delivered to systemic circulation. Choose the option which gives the correct description for A and B ?

A. Liver (A) Intestine (B)

B. Intstine (A) Liver (B)

C. Liver (A) Heart (B)

D. Intestine (A) Heart (B)

**Answer: B**



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17. Which of the following structures ultimately drains, deoxygenated blood from heart musculature through coronary vein into right atrium?

A. Superior vena cava

B. Inferior vena cava

C. Coronary sinus

D. Coronary arteries

**Answer: C**



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18. Select the correct match regarding the effect of autonomic nervous system on stroke volume and cardiac output.

- A. Parasympathetic nervous system  
(Autonomic neural system) Increase  
(Stroke volume) Decrease (Cardiac  
output)

B. Sympathetic nervous system (Autonomic neural system) Increase (Stroke volume)  
Decrease ( Cardiac output)

C. Parasympathetic nervous system  
(Autonomic neural system) Decrease  
(Stroke volume) Increase (Cardiac output)

D. Sympathetic nervous system (Autonomic neural system) Increase (Stroke volume)  
Increase (Cardiac output)

**Answer: D**



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**19.** Which of the following hormones will lead to increase in number of QRS complexes in an ECG in a minute?

- A. Adrenaline
- B. Acetylcholine
- C. Nor adrenaline
- D. Both (1) & (3)



**Answer: D**



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**20. Select the incorrect statement.**

A. Renal portal system is absent in mammals

B. Medulla oblongata can modulate cardiac function through autonomic nervous system

C. Hepatic vein carries blood from intestine  
to liver

D. In human, heart beat is initiated by  
specialised nodal tissue, hence the heart  
is called myogenic

**Answer: C**



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21. Sympathetic nerve endings release non-adrenaline which leads to

A. Increase in rate of heart beat

B. Decrease in speed of conduction of action potential through heart musculature

C. Decrease in cardiac output and stroke volume

D. Increase in stroke volume but decrease  
in cardiac output

**Answer: A**



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