

10th Standard September-2020

Answer key for Science-Biology

Part-I	marks
6. (b)Ethyl Alcohol	1
7. (b)William Harvey	1
8. (b)Axons	1
9. (b)Cytokinin	1
10. (b)Restriction enzyme	1
11. (d)1-(ii),2-(iv),3-(i),4-(iii)	1
12. (c)Metacentric – The centromere occurs in the centre of the Chromosome and forms equal arms.	1

Part-II

17.

Unipolar Neurons	Found in early embryos but not in adult
Bipolar Neurons	Found in retina of eye and olfactory epithelium of nasal chambers
Multipolar Neurons	Found in cerebral cortex of brain

(Names-1/2: Each location -1/2) (2)

18. A-Thyroid cartilage

B-Thyroid gland

C- Trachea

D-Nodule

(one part-1/2) (2)

19. (i) The age of fossils can be determined by **Radioactive carbon(C14) dating** method.

(ii)The time passed since death of a plant or animal can be calculated by measuring

the amount of C14 present in their body.

(2)

20. Applications of DNA Finger printing

- (i) This technique is widely used in forensic applications like crime investigation such as Identifying the culprit.
- (ii) It is used for paternity testing in case of disputes.
- (iii) it also helps in the study of genetic diversity of population, evolution and speciation.

(Any 2 points) (2)

21. (i) Stage is the background appear when we open the scratch window.

- (ii) The background will most often be white. We can change the background colour as we like.

(2)

Part-III

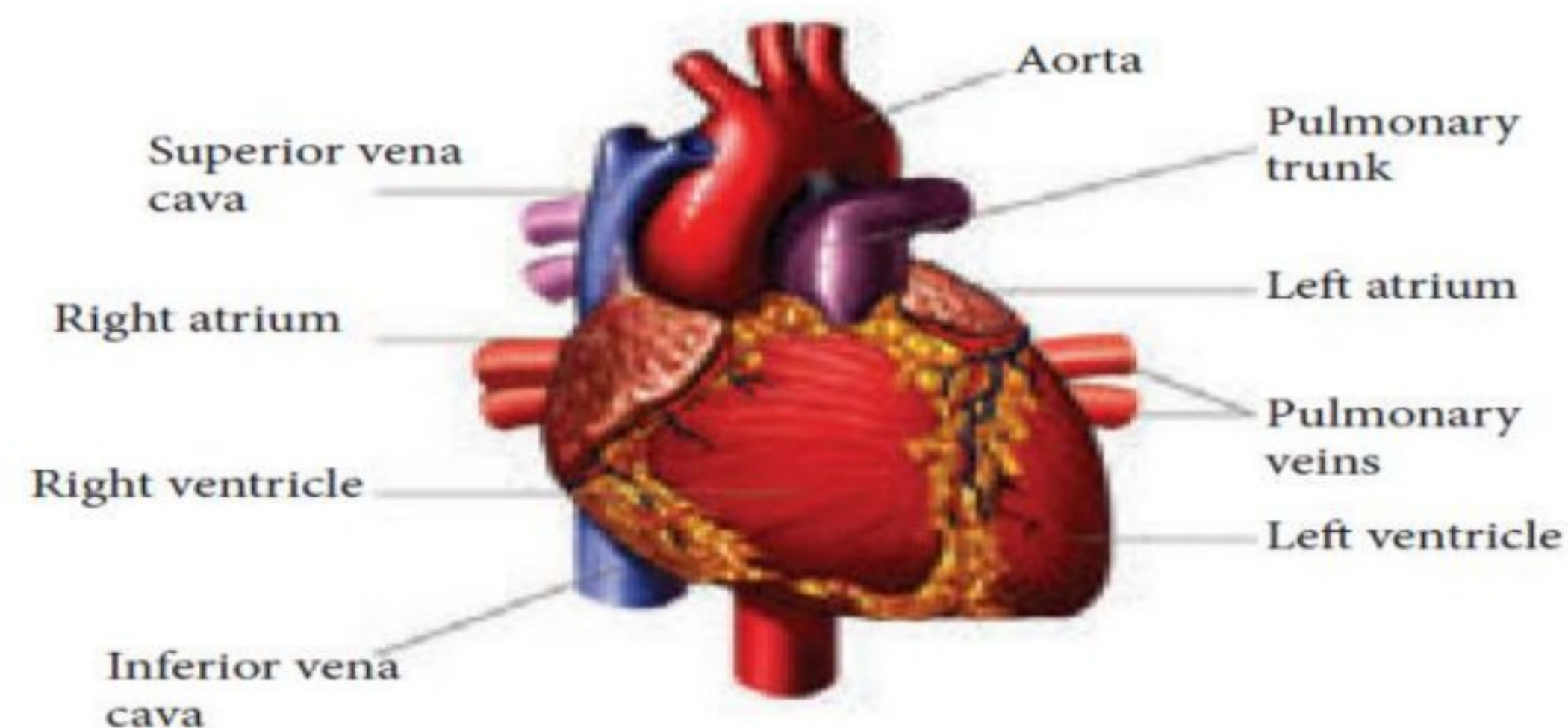
28.

S. No.	Tissues	Dicot Root	Monocot Root
1	Number of Xylem	Tetrarch	Polyarch
2	Cambium	Present(During secondary growth only)	Absent
3	Secondary Growth	Present	Absent
4	Pith	Absent	Present.

5	Conjunctive tissue	Parenchyma	Sclerenchyma
	example	Bean	Maize

(Any 4 points - 4)

29.



(diagram-2, Any 4 parts-2)

30. (i) Ethnobotany is the study of a region's plants and their practical uses through the Traditional knowledge of the local culture of people. (2)

Importance of Ethnobotany

- * It provides traditional uses of plant.
- * It gives information about certain unknown and known useful plants.
- * The ethnomedicinal data will serve as a useful source of information for the chemists, pharmacologists and practitioners of herbal medicine.
- * Tribal people utilize ethnomedicinal plant parts for the treatment of diseases like Diarrhoea, fever, headache, diabetes, jaundice, snakebites, leprosy, etc. (2)

31. (i) Gene therapy refers to the replacement of defective gene by the direct transfer of Functional genes into humans to treat genetic disease or disorder. (1)

(ii) The genetic make up of the 'patient' is altered using **recombinant DNA technology**. (1)

(iii) **Somatic gene therapy** is the replacement of defective gene in somatic cells. (1)

(iv) **Germ line gene therapy** is the replacement of defective gene in germ cell. (1)

Part-IV

35. (a)(i) To help in the free passage of air into the lungs for respiration. (2)

(ii) UTI –Urinary tract infection. Women are more susceptible to UTI.

Bacteria that are on the skin, rectum or vagina enter urethra. (2)

* Types of UTI:-1. **Cystitis or Bladder infection**

Bacteria lodged in the urinary bladder thrive and multiply leading to Inflammation. Common in the age group of 20-50. (1)

*2. **Kidney infection**:- the bacteria travel from the bladder to ureter and

Affect one or both the kidneys. It may infect the blood stream and leads to serious life-threatening complications. (1)

*3. **Asymptomatic Bacteriuria**:- The bacteria present in the urinary bladder which
May not show any symptoms. (1)

or

(b)(i) **Significance of DNA**

* It is responsible for the transmission of hereditary information from one generation to
Next generation. (1)

*It contains information required for the formation of proteins. (1)

*It controls the developmental process and life activities of an organism. (1)

(ii) **Precautions to be taken for preventing heart disease:-**

***Diet management**: reducing the intake of calories, low saturated fat, low carbohydrates,
And common salt . Diet rich in PUFA, fibre diet, fruit, vegetables, proteins, minerals and
Vitamins are advised.

***Physical activity**:- regular exercise, walking and yoga are essential.

***Addictive substance avoidance**: Alcohol consumption and smoking are to be avoided.

Any 2 points-(2)

(iii)***Child helpline**:- It provides a social worker who can assist the child by providing food,
Shelter, and protection.

***Counselling the child**: Psychologists and social workers should provide guidance,
Counselling and continuous support to a victimized child. Any 2 points-(2)

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