

Model Question Paper
A Representative Study of Mammals (B) - Part II

10th Standard

Science

Reg.No. :

I. Answer all the questions.

II. Use Blue pen only.

Time : 00:45:00 Hrs

Total Marks : 25

4 x 1 = 4

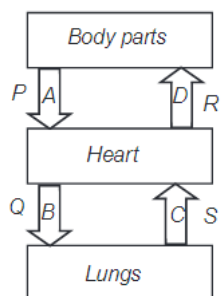
Section-A

- 1) Based on relationship, fill up: Whale: Flippers:: Bat :-----
- 2) RBC: Carrier of oxygen; WBC:-----
- 3) Based on modifications make the pairs: incisor:tusks of elephant;-----: quills of porcupine
- 4) The tusks of elephants are modified-----.

Section-B

5 x 2 = 10

- 5) i) What are the structural and functional units of kidney? ii) Arrange the organs of the human excretory system in the correct order, based on the passage of urine. Ureter, Urethra, Kidney, Urinary bladder
- 6) Observe the following flow-chart depicting blood-circulation in mammals.



Pick out the correct blood vessels A,B,C,D from the following: i) Pulmonary veins ii) Venacava iii) Pulmonary artery iv) Aorta Among the P,Q,R and S samples, identify the correct match from the following a) P & Q = Oxygenated and R & S = Deoxygenated b) P & Q = Deoxygenated and R & S = oxygenated c) All are Oxygenated d) All are Deoxygenated

- 7) Study the following passage: Most of the vertebrates have jaws with teeth. The mode of arrangement of teeth on the jaws is called dentition. The various types of teeth seen in mammals are incisors(I) canines (C) premolars (P) and molars (M). They are used for biting , tearing, chewing and grinding respectively. Canines, the tearing teeth are well-developed in carnivores and ill-developed or absent in herbivores. Now answer the following questions: i) In frogs, all the teeth in the upper jaw look alike, whereas in human beings they are different. The type of dentition in man can be called _____. a) Homodont b) Isodont c) Heterodont d) Acrodont ii) The dental formula of a mammal is written as ICPM = 2023/1023. The teeth missing in it are _____. a) incisors b) canines c) premolars d) molars
- 8) Fill in the empty boxes with suitable answers with respect to the valves of a mammalian heart.

value(s)	Location	Function
Bicuspid valve or mitral valve		Prevents the backward flow of blood from left ventricle to the right auricle
	At the right auricular ventricular aperture	Regulates the flow of blood from right auricle to right ventricle
Aortic valve	At the base of aorta	
Semilunar valve		Regulates the flow of blood from right ventricle to pulmonary artery

- 9) Any change in the lifestyle, the food habits and the body form of an organism in order to make it comfortable in the environment / habitat, is called adaptation. Identify the suitable adaptation given below against each mammal. i) conservation of body heat in large marine mammals like whale (Jaws are modified into baleen plates / Forelimbs are modified into flippers / Fat is deposited in subcutaneous tissue.) ii) Locating food source by bats- (Forelimbs are modified into wings / Hanging upside down using legs / Production of sounds and detection of the echo)

Section-C

2 x 5 = 10

- 10) Draw the L.S of kidney and label the parts.
- 11) What is adaptation? Mention the adaptations found in the following mammals. a) Whale b) Polar bear c) Kangaroo d) Herbivorous mammals.
