

Our health and medicine (CH 405)

Mid-semester exam, IIT Dharwad

Marks: 30

Be brief and to the point

Time: 2 hrs.

1. What are the major differences between prebiotics and probiotics? Why is yogurt considered very beneficial for our health? (1+1=2)

2. Metabolism of proteins in our diet mainly occurs in the stomach and in the small intestine. Briefly explain the mechanisms? (1+1=2)

↓
Densin
Hcl

3. Answer the following questions regarding respiratory system disorders: (2+3=5)

a) What is COPD? State two characteristics each for the two common types of COPD.

b) What are the triggers for an asthma attack and what symptoms a person may exhibit under such conditions? What medications the blue and brown color inhalers carry?

↓
immediate
Hiro not

↓
proventis

4. What do you mean by "two-way traffic" during a nerve signal transduction? Illustrate this phenomenon by using olfaction as an example. (1+1=2)

5. Following are the symptoms a person shows in a nervous system disorder. Identify the disease and its root cause. How would you treat such a patient? (1+1=2)

Tremors, impairment of balance, slowness of movement, stiffness, and loss of smell

Do 4 Parkinson's

6. Kidneys play a crucial role in filtering waste products from our blood. Sometimes, due to various factors, kidneys get affected. Answer the following questions below. (1x5=5)

a) What are "kidney stones" and how would a nephrologist cure this disorder?

b) What are the biomarkers in blood and urine for evaluating any kidney dysfunction?

c) What are the two common treatment options for CKD-5? Which one is a better option?

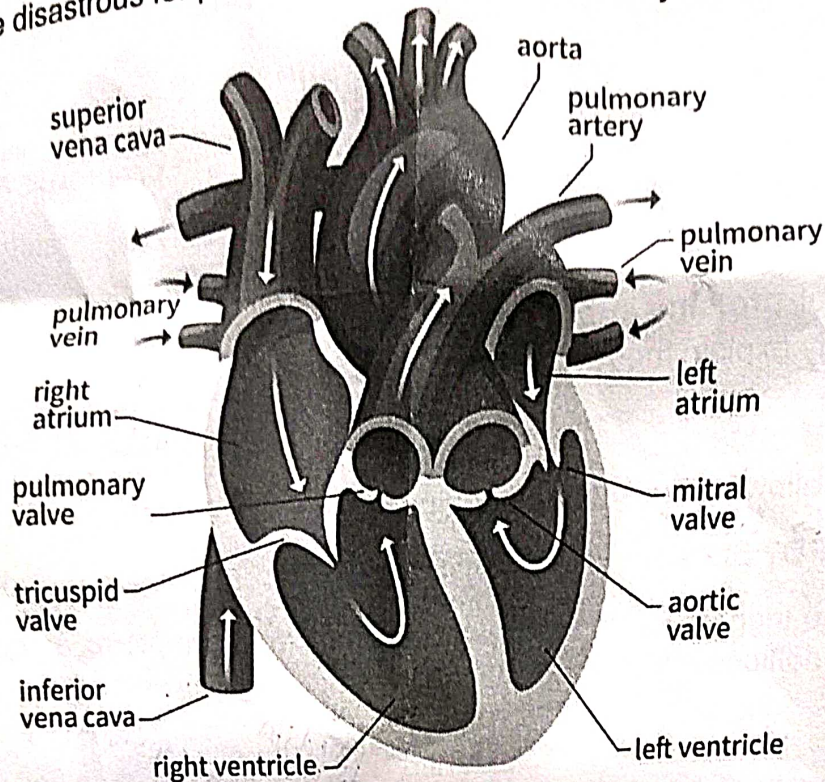
d) What are some bad habits that you can get rid of for keeping your kidneys healthy?

e) Damage to your kidneys will ultimately damage your heart. Justify.

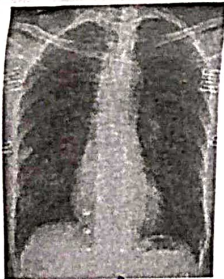
benzothiazide
high in Lipid
medicines
loss water
cold drink



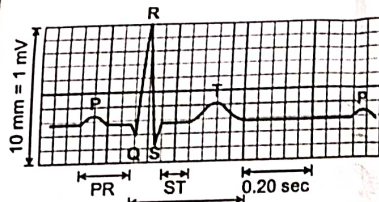
7. Explain the **direction of blood flow** during a normal heart function. When would a cardiologist recommend installation of a **pacemaker** for a heart patient? **Covid-19** was found to be disastrous for people with heart disorders. Why is that so? (2+1+1=4)



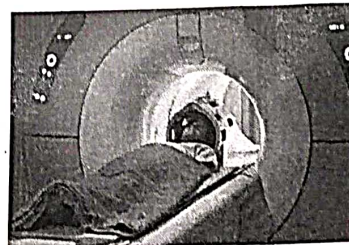
8. Name the technique/diagnostic test and the major organ for which it is used. (0.5x4=2)



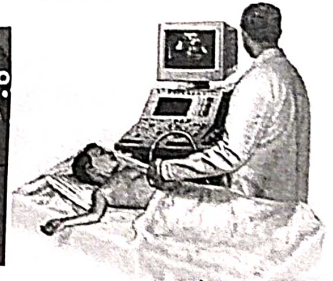
X-RAY
A



ECG
B
Heart health



C
CT C generally helps but not



Sound based
D

9. Why **hemoglobin** is important? What role does it perform during **external and internal** respiration? What supplement would you suggest to an **anemic** person? (1+1+1=3)

Fe, fruits like apples, —

10. Briefly differentiate between (Any three): (1x3=3)

a) Angioplasty vs Bypass surgery

b) Ischemic stroke vs Hemorrhagic stroke

c) Meningitis vs Encephalitis

d) Pneumonia vs Pneumothorax

The End: Good Luck