

GENERAL SCIENCE AND ABILITY

Q

No. 4

(a) Write a note on liver juice "Bile".

Liver excretes a juice called "Bile" which is stored in gall bladder. It enters in duodenum through bile duct. Bile contains no enzymes but it contains bile pigment which gives it green colour. If these pigments trapped into liver then Jaundice may result. Trapping of these pigments may be due to the accumulation of cholesterol in the liver, which may change into gall stone. Bile pigments are formed from the breakdown of haemoglobin in the liver. Bile also contains bile salts which help in the breakdown of fats.

(b) Describe role of kidney in excretion.

i Excretion, -

"The system in which waste products are excreted out of the body is called excretory system."

ii Kidney role in excretion, -

A pair of kidneys is present in the body for the excretion of waste metabolic

products.

ii Position of kidney,

Right kidney is slightly lower than the left kidney.

iii Number of kidneys,

Kidneys are two in number.

iv Position of kidneys,

They are attached to the dorsal body wall, on either side of the vertebral column.

v Unit of kidney,

Each kidney is divided into 2-million tiny tubes called nephron.

vi Working of Nephron,

a Filtration,

Blood containing waste products enters into glomerulus. Due to high blood pressure and porous walls of the glomerulus blood is filtered here. Blood cells and proteins remain in the glomerulus while glucose, urea, uric acid and some important salts are filtered here. That filtrate enters into the proximal part of the nephron.

b) Reabsorption,

All the useful constituents of the filtrate like glucose, salts and water is reabsorbed in the proximal loop of Henle, and distal part of the nephron by the peritubular capillaries which are surrounding these parts.

Dos and Don'ts for General Science & Ability Paper

Date: _____

Hi there, you've done well. Know that

3) Secretion
The inner layer of nephron also secretes nitrogenous waste products into the lumen of nephron. There are a few things I would like to highlight.

All the waste products from the distal part enter into the collecting duct which interns open into the pelvis. From pelvis these enter into the Ureter then store into the urinary bladder from there excreted outside through urethra.

1. A 5 marks part requires at least 2 and at max 3 sides of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.

5. Focus on your spellings and your grammar. Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

Good luck for CSS 2025. You're gonna rock in sha Allah. :)

- i. Regulation of blood volume.
- ii. Regulation of blood pressure.
- iii. Regulation of ion balance.
- iv. Regulation of acid-base balance.
- v. Synthesis of vitamin