

09-06-14 (Reg)
ASTU. 2nd Sem.

Total No. of printed pages = 6

PY13220 Institute of Pharmaceutical Sciences
Roll No. of candidate

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(Even Semester)
**HUMAN ANATOMY AND
PHYSIOLOGY - II**

Full Marks-100 Pass Marks-35 Time-Three hours

The figures in the margin indicate full marks
for the questions.

1. Answer *all* the questions : 1×10=10
- (a) The role of oxytocin
- (i) Absorption of water from renal tubule.
 - (ii) Relaxation of birth canal and milk secretion.
 - (iii) Increase adrenaline secretion.
 - (iv) All of these.
- (b) Name of the cells involved in insulin secretion is _____.

[Turn over

(c) Which trimester of pregnancy is mostly affected by the Teratogens ?

- (i) First trimester
- (ii) Second trimester
- (iii) Third trimester
- (iv) All of these.

(d) Chymotrypsin is a

- (i) Hormone
- (ii) Pancreatic enzyme
- (iii) Intestinal enzyme
- (iv) Gastric enzyme.

(e) Gastric acid is secreted from _____ cell.

(f) Emotional behaviour is controlled by the _____ area of the brain.

(g) Hypermetropia is called as

- (i) Nearsightedness
- (ii) Farsightedness
- (iii) Astigmatism
- (iv) All of these.

(h) Water and electrolyte balance of kidney occurs due to the activation of

(i) Renin-angiotensin and aldosterone system.

(ii) Action of ADH on aquaporin channel.

(iii) ANP system of heart.

(iv) All of these.

(i) Retina is containing _____ cells, which use vitamin A to see in deem light.

(j) Chloride shift is

(i) Shift of Chloride ion inside the RBC in exchange with Bicarbonate ion.

(ii) Shift of Chloride ion inside the RBC in exchange with Phosphate ion.

(iii) Shift of Chloride ion inside the RBC in exchange with Sodium ion.

(iv) Shift of Bicarbonate ion inside the RBC in exchange with Chloride ion.

2. Answer any *ten* questions : $4 \times 10 = 40$

- (a) Describe the microscopic structures of small intestine.
- (b) Describe the Cephalic, Gastric and Intestinal phase of GI secretion.
- (c) Write a short note on GI hormones.
- (d) Write briefly the name and innervations of cranial nerves.
- (e) Describe Bohr effect on oxy-haemoglobin dissociation curve in different conditions.
- (f) Describe the process of trapping of iodine and synthesis of T_3 , T_4 occurs in thyroid gland.
- (g) Describe the mechanism of 'light and dark adaptation of the eye' and adjustment of focal length.
- (h) Briefly describe the different abnormal physiological conditions that occur due to the hypo and hyper secretion of thyroid gland and deficiency of iodine.
- (i) Briefly describe the structure of skin.

(j) Write the cause, symptom and management of peptic ulcer.

(k) Briefly describe the functions of liver.

(l) Write the functions of Sertoli cell and Leydig cell in male reproductive system.

3. Answer any *five* questions.

(a) Describe the structure and functions of the different parts of nephron. Write briefly about the water and electrolyte balance of kidney.

5+5=10

(b) Differentiate sympathetic and parasympathetic nervous system. Describe in brief the mechanism of neurohumoral transmission in CNS.

4+6=10

(c) What is internal and external respiration ? Describe the oxygen and carbon dioxide transport mechanism by blood during respiration.

3+7=10

(d) What is ovulation cycle ? Describe the ovarian and uterine events of ovulation cycle. Write a short note on Graafian follicle.

2+6+2=10

(e) Write the name and functions of the hormones secreted from pituitary gland. Briefly write the name, source, functions of the hormone secreted from adrenal gland. $4+6=10$

(f) Classify the various parts of CNS and briefly describe their function. Write the mechanism of the perception of sound from ear to brain. $6+4=10$

(g) What do you mean by the term reflex action and reflex arc? Describe various types of reflex actions with examples. Describe the knee jerk reflex action with proper diagram. $3+2+5=10$