

DIRECTOR OF HEALTH, MEDICAL SERVICES AND MEDICAL EDUCATION  
GUJARAT STATE

27<sup>TH</sup> LABORATORY AND X-RAY RECHNICIANS TRAINING COURSE EXAMINATION  
PHYSIOLOGY

2015

Instructions: 1. Figure to the right indicates marks of each question.  
2. Draw diagrams wherever necessary.

Date: 12/08/15

Time: 2 hours

Total marks: 50

Q.1 (A) Answer any five of the following:

(15)

1. What are the components and functions of blood? 60
2. What are the sites of red cell formation before and after birth?
3. What are the uses of blood smear?
4. How do you identify the RBC and WBC diluting pipettes?
5. What are the criteria of an ideal smear?
6. What is the principle of microscopy?
7. What are the functions of haemoglobin? 61

(B) Match the following:

(05)

- |                   |              |
|-------------------|--------------|
| B 1. Nephron      | a. WBC       |
| C 2. Neuron       | b. Kidney    |
| A 3. Phagocytosis | c. CNS       |
| E 4. Haemostasis  | d. Pancrease |
| D 5. Insulin      | e. Platelet  |

Q.2 (A) Write short notes on any three:

(15)

1. Blood groups. ✓
2. Structure of skeletal muscle. ✓ 43
3. Functions of respiratory system. ✓ 154
4. Functions of Gastrointestinal system. ✓ 107
5. Menstrual cycle. ✓

(B) Write true or false and correct it if it is not true

(05)

1. Erythropoiesis is a process of formation of RBCs. ✓
2. Pepsinogen is activated by High pH. ✓
3. Normal tidal volume is 500ml. ✓
4. Serum bilirubin level >2mg% is considered normal. ✓
5. A.V. Node is a pacemaker of Heart. ✓

Q.3: Fill in the blanks

(10)

1. Myofibril is the structural and functional unit of skeletal muscle.
2. Normal glomerular filtration rate is 125 ml/min.
3. RBCs have life span of 120 days.
4. HCl is secreted in stomach by parietal cells of main gastric glands. ~~parietal~~
5. Growth hormone is secreted by pituitary gland. ~~pituitary~~ (Anterior pituitary gland)
6. Testosterone is secreted by Testis
7. Normal Respiratory Rate is no see 12 to 20 breath/min
8. Most common neurotransmitter secreted at synapse is Acetylcholine ~~Acetylcholine~~ <sup>COA</sup> ~~COA~~
9. Normal platelet count is 4-5 lakh to 4 lakh ~~4-5 lakh to 4 lakh~~ <sup>comm</sup> ~~comm~~
10. T cells are responsible for cell-mediated immunity.

500

Anterior pituitary