

2013

DIRECTOR OF HEALTH, MEDICAL SERVICES & MEDICAL EDUCATION

GUJARAT STATE

25TH LABORATORY & X-RAY TECHNICIANS TRAINING COURSE EXAMINATION

PHYSIOLOGY

2013

- Instructions: 1. Marks are indicated on the right
2. Draw Diagrams wherever necessary

oxygen capacity 15%
RBC

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

1. Write the normal value of Red Blood Cell (RBC) count and define anaemia.
2. Define Erythrocyte Sedimentation Rate (ESR). Name the methods used to determine ESR and write about its clinical significance.
3. Enumerate the uses of high power, low power and oil immersion objectives of a microscope.
4. Name the instrument used for measurement of blood pressure and define systolic and diastolic blood pressure.
5. Mention the instruments used to measure lung volumes and capacities. How vital capacity is measured?
6. List the different instruments and solutions required for estimation of differential count of a person.
7. Define isotonic solution and mention the concentration of normal saline used for amphibian and mammalian tissue preparation

(B) Match the following

- | | |
|-----------------------|-------------------|
| 1. P-waves - c | a. Anticoagulant |
| 2. Troponin - d | b. Pancreas |
| 3. Rods and Cones - e | c. ECG |
| 4. Heparin - a | d. Muscle |
| 5. Insulin - b | e. Photoreceptors |

05

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

1. Functions of kidney ✓
2. Contraceptive methods ✓
3. Cerebral cortex ✓
4. Glucose tolerance Test (GTT) ✓
5. Blood Groups ✓

15

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

1. Cardiac output is 5 litres/minute in normal adult person. ✓
2. Menarche refers to the onset of menstruation. ✓
3. Clinically jaundice occurs when serum bilirubin exceeds 2 mg/100 ml. ✓
4. Haemophilia is a disorder in which bleeding time is prolonged. false
5. Serum creatinine level increases in kidney dysfunction. ✓

05

Q.3 Fill in the blanks

1. Perometry is the instrument used to plot the field of vision.
2. Audiometry is done to assess the sense of hearing.
3. Process of formation of sperm is known as spermatogenesis.
4. Normal respiratory rate in adults is 12-20 breath/min.
5. Functional and structural unit of kidney is nephron.
6. Fat digestion is the function of Bile salt secreted by liver.
7. Normal human body temperature is 37°C (98.6°F).
8. Junction between two neurons is called synapse.
9. Main function of Lymphocyte cells is to develop immunity.
10. Growth hormone is secreted by Anterior gland.

10

WBC = 10x
RBC = 40x
synapse