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SARDAR PATEL UNIVERSITY
M.Sc., Third Semester Examination
Tuesday, 4-12-2012
2.30 pm – 5.30 pm
PS03CZOO 03: APPLIED PHYSIOLOGY

MARKS: 70

Q. 1. Select the best Answer:

8 M

1. Neutropenia results due to.....
(a) too few leukocytes; (b) abnormally low count of neutrophils; (c) lymphocytopenia; (d) eosinophilia
2. is an abnormal constituent of urine
(a) chloride; (b) sulfate; (c) acetoacetic acid; (d) uric acid
3. Total paralysis of arm, leg and trunk on the same side of the body is known as.....
(a) paraplegia; (b) quadriplegia; (c) palsy; (d) hemiplegia
4. PMDD is.....
(a) premenstrual destructive disorder; (b) premenstrual dysphoric disorder; (c) premenstrual distinct disorder; (d) premenstrual debilitating disorder
5. 70% of gastric ulcers are related to
(a) infections by H pylori; (b) ingestion of Ibuprofen; (c) starvation; (d) indigestion
6. Propulsion and deglutition are controlled by.....cranial nerves
(a) III and IV; (b) VIII and IX; (c) IX and X; (d) XI and XII
7. Diaphragm is a sheet of skeletal muscle that separates the.....
(a) lungs and heart; (b) right lung and left lung; (c) digestive system and heart; (d) thorax and abdomen
8. Macula densa is present in.....
(a) lungs; (b) liver; (c) stomach; (d) kidney

Q.2. Answer any seven (07) of the following:

14 M

1. What are respiratory zones? Enumerate their functions.
2. What is acid base balance? What are the normal P^H , PCO_2 and HCO_3 values for blood?
3. What is oxyhemoglobin dissociation curve? Explain.
4. What is sarcomere? What are its structural components?

(1)

5. What is nephron? Draw a neat labeled diagram to show the structural details of nephron.
6. What is contraception? Which hormone/s is/are used as contraceptive/s?
7. What is Graafian follicle? Draw a neat labeled diagram of Graafian follicle.
8. What is neuron? Classify neurons based on their structural features.
9. What is PMS? What are its characteristic features?

- Q. 3.** (a) What are physiological effects of starvation? Explain. **6M**
(b) Discuss the physiological processes occurring in intestine. **6M**

OR

- (b) What are GIT hormones? Explain their physiological role **6M**

- Q.4.** (a) What are respiratory acidosis and respiratory alkalosis? How are they caused and compensated? **6M**
(b) Give an account of any two respiratory disorders and remedies. **6M**

OR

- (b) Explain the differences between cardiac, skeletal and smooth muscles with reference to their physiological role. **6M**

- Q.5.** (a) What are leucocytes? Give an account of different types of leucocytes and mention their physiological role. **6M**
(b) How does a stimulus transfer take place in a neuron? Explain. **6M**

OR

- (b) What is dialysis? When is it necessary? How is it performed? Explain. **6M**

- Q.6.** (a) How does gas exchange take place between lungs and blood vessels? What 'gas laws' are implicated? Explain. **6M**
(b) Draw a neat labeled diagram showing a cross-sectional view of a human kidney and explain how glomerular filtration takes place. **6M**

OR

- (b) What is anemia? Give an account of different types of anemias. **6M**

*****End of Question Paper*****