

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

Time : 3 Hrs.

Pre. Ph.D. Examination June-2017

[Max. Marks: 100]

Anatomy
Paper – II
Area of Specialization

Q.P Code: 1102*Your answers should be specific to the questions asked.**Draw neat labelled diagrams wherever necessary.***LONG ESSAY****10 X 10 = 100 Marks**

1. Use Hebb William's Maze and T-Maze to evaluate learning and memory.
2. How would you use Ion selective electrode method to detect fluoride?
3. Describe the gross anatomy, functions and histology of hippocampus of the Wistar rat.
4. How do special stains indicate histomorphological changes to hippocampus?
5. How would you determine the glutamate neurotransmitters by ELISA?
6. How would you use the western Blot technique to understand glutamate protein expression in hippocampus?
7. What is the role of Gingko biloba in preventing cognitive deficits?
8. Describe the functions of hippocampus of rat.
9. Describe the toxic effects of fluoride on wistar rats.
10. Explain the structure and function of glutamate receptors.

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REG. NO: 16PhD0104

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1. Describe adipose tissue under following headings.
Definition, structural, Features, Anatomical distributions and functions.
2. Describe Adipose tissue remodeling in obesity.
3. Describe the relevance and use of anthropometry in obesity.
4. Describe adipose tissue sectioning and staining.
5. Massons Trichrome stain.
6. Role of IHC in identifying collagen.
7. Describe molecular events in development of adipose tissue.
8. Describe microscopic anatomy of adipose tissue.
9. Describe the role of polychlorinated biphenyl.
10. Write in detail about adipose tissue processing for histology.

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1. Describe in detail the gross anatomy of the placenta.
2. Explain the causes and symptoms of pre-eclampsia.
3. Write an account of the preparation of slides for histological studies.
4. What is ELISA? Explain the different types of ELISA.
5. Classify the various biomarkers and write a note on their uses and advantages.
6. Explain the morphological and histological variations in human placenta in hypertensive disorders of pregnancy.
7. Classify hypertension in pregnancy.
8. What is the normal serum fluoride levels? What is the procedure used to analyze levels of fluoride in serum. Explain the methodology.
9. Explain the procedure of staining histology slides and criteria for analysis of the stained slide.
10. Write in detail the novel biomarkers of pre-eclampsia.

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1. What is radiofrequency Electro Magnetic Radiation. Name the sources and factors affecting human exposure.
2. Describe in detail morphological and physiological properties of cells of hippocampal formation.
3. Describe the guidelines to good practice in housing and handling for mouse in laboratory.
4. Describe sholl Analysis in detail. Add a note on software packages.
5. Describe the functions of hippocampus. What is its involvement in cognition.
6. Describe the protocol of sectioning and slide mounting of tissue. Add a note on sectioning problems and possible remedies.
7. Describe the T-Maze test in detail.
8. Describe protocol for Golgi-cox staining step by step.
9. Describe in detail major cell type of Dentate gyrus and Add a note on origin and termination of major extrinsic inputs in Dentate gyrus.
10. Describe the types of microtomes and its most common application. Add a note on microtome knife design.

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