Sem - I (Semester)
8/1/2024

MPL103T

Duration: 3 Hrs **Total marks: 75**

N.B.: 1. All questions are compulsory
2. Figures to right indicate full marks

Q I. Answer the following **20 Marks**

1. ______________ is resorted to events where an animal is required to be sacrificed or termination of an experiment or otherwise for ethical reasons.
   a. Constraining
   b. Euthanasia
   c. Catalepsy
   d. Electrocution

2. ____________is a transgenic animal creation method
   a. Retrovirus mediated gene transfer
   b. Cryopreservation method
   c. Staphylococcus Aureus mediated gene transfer
   d. Gene extravasation method

3. As per CCSEA guidelines, quarantine period for large animals like cat, dogs is
   a. 1 Week
   b. 6 Weeks
   c. 6 Months
   d. 3 Months

4. In the mouse, the estrous cycle is divided into _______ stages
   a. 4
   b. 2
   c. 1
   d. 3

5. ___________ is used to induce epilepsy in mice.
   a. Isoproterenol
   b. Pentylenetetrazole
   c. Silymarin
   d. Alloxan

6. Elevated plus maze test is one of the most widely used tests for measuring _____
   a. Manic behavior
   b. Schizophrenic behavior
   c. Depression-like behavior
   d. Anxiety-like behavior

7. ________________ is screening model for anti-Parkinson's drug
   a. L-dopa antagonism in rats
   b. MPTP model in monkey
   c. Light dark model
   d. Water maze test

8. Negative geotaxis is studied in _______
   a. CNS screening methods
   b. Anti-emetic activity
   c. CVS screening methods
   d. Screening of Anti asthmatic drugs

9. Assessment of acidity with NaOH is carried out in
   a. Pylorus ligation test
   b. Stress induced ulcer
   c. Ethanol induced gastric ulcer model
   d. Tail suspension test

10. Hepatotoxicity can be induced by
   a. TMT
   b. Carbon tetra chloride
   c. Silymarin _________
   d. Formaldehyde

11. Jumping, withdrawal and licking of paws are evaluation parameters for
   a. Electrical stimulation rat test
   b. Hot plate method
   c. Writhing test
   d. Pain inflamed tissue

12. Egg albumin is an inducing agent for _____________
   a. Pyrexia
   b. Inflammation
   c. Ulcer
   d. Cancer

13. Konzett-Rossler method is used to assess _______________
   a. Anxiolytic activity
   b. Antiparkinsons activity
   c. Antiasthmatic activity
   d. Antiemetic activity

14. In diuretic screening models saluretic activity is used for evaluation of
    a. Creatinine clearance
    b. Sodium and chloride excretion
    c. Calcium and Potassium clearance
    d. Protein clearance

15. The principle of Goldblatt method is producing renovascular hypertension by __________
    a. constricting renal blood vessels
    b. constricting one Jugular vein one femoral vein
    c. ligating carotid artery
    d. constricting the pylorus sphincter

16. Cardiac electrophysiology and rhythm disturbances can be monitored by______
    a. Patch clamp technique
    b. Immunochemistry
    c. Rodent telemetry model
    d. Spirometer Heart tracer model

17. Immunoasay of digoxin includes ________
    a. Recombinant glucose-6-phosphate dehydrogenase enzyme
    b. Tocilizumab monoclonal antibody
    c. Recombinant Carbonyl cyclase enzyme
    d. Horseradish peroxidase enzyme

18. Antibody, Substrate, Horse radish peroxidase enzyme are components of
    a. Stem cell Assay
    b. Radioimmunoassy
    c. ELISA
    d. Immunoflurosence

19. ___________ is associated with exposure to biohazard.
    a. Radio-immunoassay
    b. Enzyme Linked Immunoassay
    c. Fluorescence Polarization Immunoassay
    d. Chemiluminescence immunoassay

20. The 3Rs of animal research stand for _________
    a. Replacement, Regain and Refinement
    b. Replacement, Reduction and Redefine
    c. Replacement, Reduction and Refinement
    d. Replacement, Rejection and Redefine

Q II. Attempt any TWO of the following questions **20 Marks**

1. Enumerate various experimental models for evaluation of Alzheimer's disease and explain any two in detail.
2. Enlist in-vivo and in-vitro preclinical screening methods for anti-inflammatory activity. Explain any two in-vivo method.
3. Enlist various experimental models for testing of antihypertensive drugs. Explain any two in vivo models in detail.

Q III. Attempt any SEVEN of the following questions **35 Marks**

1. Mention any four methods of production of transgenic animals explain any one in details
2. Write a note on euthanasia of experimental animals.
3. Enlist the screening models for antiepileptic activity. Discuss any one in vivo model
4. Enlist models for peptic ulcer. Explain in details SHAY test.
5. Write a note on MTT assay for evaluation of anticancer drugs,
6. Explain any one experimental model to induce cardiac antiarrythmia.
7. Explain streptozotocin induced diabetic model in detail.
8. Write a note on ELISA and its applications in research.
9. Discuss in detail immunoassay of digoxin.
