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BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – DMLT-2021

Course Name – Parasitology & Animal Care

Course Code - DMLT402

(Semester IV)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the parasite which causes malaria in humans
 - a) Schistosoma mansoni
 - b) Taenia solium
 - c) Plasmodium falciparum
 - d) Enterobius vermicularis
- (ii) Select the option indicating the parasite which take food and shelter from the host but does not harm the host
 - a) Ectoparasite
 - b) Vector
 - c) Pathogenic
 - d) Commensal
- (iii) Select Number of flagella present in giardia lamblia
 - a) One
 - b) Two
 - c) Three
 - d) Four
- (iv) Select the color of the cytoplasm of malaria parasite after staining with Giemsa
 - a) Dark red colour
 - b) Dark purple
 - c) Blue colour
 - d) White red
- (v) The larva of taenia saginata attached with suckers to the mucosa of
 - a) Small intestine
 - b) Large intestine
 - c) Stomach
 - d) Pancreas
- (vi) Which of the following breeding systems involves crossing two different breeds or varieties of animals?
 - a) Inbreeding
 - b) Outbreeding
 - c) Backcrossing
 - d) Linebreeding
- (vii) Choose the way Stool sample is collected
 - a) Randomly
 - b) On fasting
 - c) At night
 - d) Early morning
- (viii) The following forms of plasmodium falciparum can be seen in peripheral blood smear in light infection
 - a) rings and schizonts
 - b) schizonts and gametocyte
 - c) gametocyte and ring
 - d) rings schizonts and gametocyte

- (ix) Which of the following parasites infects red blood cells?
 a) Giardia lamblia
 b) Taenia saginata
 c) Plasmodium falciparum
 d) Enterobius vermicularis
- (x) Choose the stain used for nuclear stain in E.histolytica
 a) Buffered methylene blue
 b) Eosin
 c) methylene
 d) All of these
- (xi) Select the stage of the malaria life cycle occurs in the red blood cells
 a) Merozoite
 b) Trophozoite
 c) Sporozoite
 d) Gametocyte
- (xii) Select the name of the process by which the malaria parasite replicates within the red blood cells
 a) Binary fission
 b) Meiosis
 c) Mitosis
 d) Budding
- (xiii) What is the nature of the relationship between a host and a parasite?
 a) Commensalism
 b) Mutualism
 c) Parasitism
 d) Competition
- (xiv) Which of the following is an important factor to consider when handling animals in research, as per the guidelines of CPCSEA in India?
 a) Using anesthesia as sparingly as possible to minimize costs
 b) Providing minimal space to animals to limit their movement
 c) Keeping animals in isolation without any social interaction
 d) Providing a suitable and comfortable environment for animals
- (xv) What is the purpose of maintaining appropriate in vivo conditions during animal research experiments?
 a) To minimize the costs of the experiment
 b) To maximize the number of animals used in the experiment
 c) To ensure that the experimental results are accurate and reproducible
 d) To minimize the time required to complete the experiment

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define the ectoparasite and endoparasite (3)
3. Define the term Sporozoite with features (3)
4. Define the importance of handling laboratory animals (3)
5. Illustrate the efficacy iodine method for stool examination (3)
6. Explain In-vitro condition in liver tissue. Make a framework of the experiment (3)

OR

- Explain In-vitro condition in kidney tissue. Make a framework of the experiment (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Briefly describe the in-vivo experiment procedure in animal (5)
8. Define the life cycle of Entamoeba histolytica (5)
9. How the trophozoite and cyst stages of Giardia lamblia differ from each other in terms of their morphology, metabolism, infectivity, and susceptibility to disinfectants (5)
10. Explain in-vivo experimental research on rat and mice model: Duration-60 days, Rats-40, Treat1-sodium fluoride, Medicine-1-Vitamin-C Make a diagram with cages only pre-treated mood on rat and mice model (5)
11. Compare the Malaria life cycle of sporozoite and merozoite (5)

12. How does the thick blood film technique improve the detection and identification of microfilariae in the diagnosis of filarial infections (5)

OR

What is the effectiveness of the centrifugation and formal ether concentration techniques in detecting different types of parasites in stool samples (5)
