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**M.Sc. (Fourth Semester)  
EXAMINATION, May - June, 2022  
BIO SCIENCE**

**Paper Third**

**(SPECIAL PAPER (A)- PARASITOLOGY)**

*Time : Three Hours]*

*[Maximum Marks:80*

*[Minimum Pass Marks:16*

**Note : Attempt all sections as directed.**

**(Section - A)**

**(Objective/Multiple Choice Questions)**

**(1 mark each)**

**Choose the correct/appropriate answer :**

1. Which is the most appropriate definition for symbiosis-
  - (A) A relation in which one benefits, the other (host) is not obviously affected
  - (B) Both benefit from the association.
  - (C) One benefits, the other (host) is (potentially) harmed
  - (D) An intimate association between different species of organisms.

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2. A wandering parasite is called as -
  - (A) Obligatory
  - (B) Accidental
  - (C) Facultative
  - (D) Erratic
3. A host where parasite remains viable with no further development is known as:
  - (A) Definitive host
  - (B) Intermediate host
  - (C) Carrier
  - (D) Vector
4. Free living stage in the life cycle of Monogenea:
  - (A) Coracidium
  - (B) Miracidium
  - (C) Oncomiracidium
  - (D) Cercaria
5. Necrosis 'En Masse' with putrefaction is known as:
  - (A) Inflammation
  - (B) Degeneration
  - (C) Necrosis
  - (D) Gangrene

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6. The correct chronological order of events occurring during acute inflammation:
- (A) Transient vasoconstriction, stasis of blood flow, increased permeability, vasodilation
  - (B) Transient vasoconstriction, increased permeability, vasodilation, stasis of blood flow
  - (C) Vasodilation, increased permeability, stasis of blood flow, neutrophil accumulation
  - (D) Neutrophil accumulation, vasodilation, increased permeability, stasis of blood flow
7. The functions of the conoid are -
- (A) Penetration of host cells
  - (B) Secretes a proteolytic enzyme
  - (C) May be related to motility
  - (D) Helps in reproduction
8. Vectors for scabies and chigger are:
- (A) *Glossina* spp.
  - (B) *Culex* spp.
  - (C) *Simulium* spp.
  - (D) *Sarcoptes* spp.
9. Which tick species carries Lyme disease (*Borrelia burgdorferi*)?
- (A) *Amblyomma americanum*
  - (B) *Dermacentor variabilis*
  - (C) *Ixodes scapularis*
  - (D) *Haemophysalis* spp

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10. *Triatoma infestans* is the vector for:
- (A) *Trypanosoma cruzi*
  - (B) *Leishmania donovani*
  - (C) *Leishmania tropica*
  - (D) *Trypanosoma brucei*
11. Winterbottom's sign is a characteristic of:
- (A) Human African Trypanosomiasis
  - (B) Kalazar
  - (C) Blackwater fever
  - (D) Snail fever
12. The site of localization of adult *Schistosoma hematobium* is:
- (A) Pelvic venous plexuses.
  - (B) Venous plexuses of sigmoidorectal area.
  - (C) Venous plexuses of ileocaecal region.
  - (D) Hepatic portal vein
13. The opening of the male reproductive system of a nematode is called the;
- (A) Cloaca
  - (B) Vulva
  - (C) Uterus
  - (D) Amphid

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14. Each of the following statements concerning hook worm infection is correct, EXCEPT:
- (A) Hookworm infection can cause pneumonia
  - (B) Hookworm infection is acquired by humans when filariform larvae penetrate in the skin
  - (C) Hookworm infection is caused by *Ancylostoma duodenale*
  - (D) Hookworm infection can be diagnosed by finding the trophozoite in the stool
15. Clay pipe stem cirrhosis is a consequence of:
- (A) Urinary Bilharziasis
  - (B) Katayama fever
  - (C) Black water fever
  - (D) Visceral leishmaniasis
16. Each of the following statements concerning *Ascaris lumbricoides* is correct EXCEPT:
- (A) *Ascaris lumbricoides* is one of the largest nematodes
  - (B) *Ascaris lumbricoides* can cause pneumonia
  - (C) Both dogs and cats are intermediate host of *Ascaris lumbricoides*
  - (D) *A lumbricoides* is transmitted by ingestion of eggs
17. How are trypanosomes able to evade the host immune system?
- (A) They have an anti-phagocytic capsule.
  - (B) They are obligate intracellular parasites
  - (C) They continuously alter their surface antigens
  - (D) They produce enzymes that digest antibodies

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18. Pernicious malaria is caused by:
- (A) *Plasmodium vivax*
  - (B) *Plasmodium falciparum*
  - (C) *Plasmodium ovale*
  - (D) *Plasmodium malariae*
19. Incubation period of *Plasmodium vivax* is about:
- (A) 6 - 8 weeks
  - (B) 10 - 12 days
  - (C) 15 - 20 days
  - (D) 20 - 40 days
20. A 10 years old girl from Samar presented with an enlarged abdomen. Splenomegaly was apparent and an Kato Thick Smear showed eggs with lateral knobs. This child is probably infected with:
- (A) *Taenia saginata*
  - (B) *Ascaris lumbricoides*
  - (C) *Trichuris trichiura*
  - (D) *Schistosoma japonicum*

### Section - B

#### (Very Short Answer Type Questions)

(2 marks each)

**Note: Define the following in 2 to 3 Lines (Any 08)**

1. Infection

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2. Vector
3. Necrosis
4. Hydrops
5. Coenurus
6. Predilection site
7. Edema
8. Latent period
9. Hematuria
10. Lymphadenitis

**Section - C**

**(Short Answer Type Questions)**

**(3 marks each)**

**Note: Explain the following (75 to 100 words approx.)  
using diagrams wherever necessary (Any 08).**

1. Degeneration
2. Inflammation
3. Repair
4. Vectors and their control
5. Post Kalazar Dermal Leishmanoid
6. Chagas disease
7. Hydatid diseases
8. Katayama fever
9. Hookworm anemia
10. Biology of plant parasitic nematodes

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**Section - D**

**(Long Answer Type Questions)**

**(5 marks each)**

**Note: Draw well labelled diagrams wherever necessary.**

1. What are parasites? Discuss the phenomenon of Parasitism and its effects.

**OR**

Write notes on the various mechanisms of disease transmission with particular reference to vectors.

2. Discuss the epidemiology, pathogenesis and control of Malaria.

**OR**

Leishmaniasis

3. Draw a well labelled diagram of a cestode and its life cycle pattern.

**OR**

Write notes on Urinary Bilharziasis.

4. Write notes on Ascariasis

**OR**

Lymphatic filariasis

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