

Medical parasitology questions

- 1- One of the following protozoan phyla does not cause human diseases:
 - a- Microspora
 - b- Sacromastigophora
 - c- Apicomplexa
 - d- Ciliophora
 - e- None of the above

- 2- One of the following subphyla undergoes a complex life cycle, usually involving 2 different hosts:
 - a- Mastigophora
 - b- Ciliophora
 - c- Sporozoa
 - d- Sacrodina
 - e- None of the above

- 3- The Trematoda phylum belongs to which of the following?
 - a- Platyhelminths
 - b- Nemathelminths
 - c- Arthropoda
 - d- Microspora
 - e- None of the above

- 4- An intestinal flagellate species known as the only common pathogenic protozoan found in the duodenum and jejunum of humans is:
 - a- *Entamoeba histolytica*
 - b- *Giardia lamblia*
 - c- *Balantidium coli*
 - d- *Trichomonas vaginalis*
 - e- None of the above

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- 5- The largest intestinal protozoan of humans is:
- a- *Entamoeba histolytica*
 - b- *Giardia lamblia*
 - c- *Balantidium coli*
 - d- *Trichomonas vaginalis*
 - e- None of the above
- 6- The intestinal amoeba that has pseudopodia as part of its **trophozoite** structure :
- a- *Entamoeba histolytica*
 - b- *Giardia lamblia*
 - c- *Balantidium coli*
 - d- *Trichomonas vaginalis*
 - e- None of the above
- 7- Treatment used for **children** patients infected with *Giardia lamblia* is usually through which of the following drugs:
- a- Oxytetracycline
 - b- Metronidazole (Flagyl)
 - c- Paromycin
 - d- Tinidazole
 - e- Omidazole
- 8- The antibiotic Oxytetracycline is usually prescribed to patients infected with:
- a- *Entamoeba histolytica*
 - b- *Giardia lamblia*
 - c- *Balantidium coli*
 - d- *Trichomonas vaginalis*
 - e- None of the above

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- 9- One of the following genera belongs to the hemoflagellates:
- a- Giardia
 - b- Trichomonas
 - c- Leishmania
 - d- Chilomastix
 - e- Cestoda
- 10- Mastigophora (a phylum belonging to the subkingdom Protozoa) includes flagellates that usually infect which internal sites of the human body:
- a- Intestines and genitourinary tract
 - b- Bones and muscles
 - c- Blood and tissues
 - d- Large intestine only
 - e- Both A and C are correct
- 11- Human sleeping sickness can be caused by which of the following:
- a- All known human American trypanosomes
 - b- *Trypanosoma cruzi*
 - c- *Leishmania tropica*
 - d- Species belonging to African trypanosomes
 - e- Two of the above is correct
- 12- Which of the following parasitic flagellate causes Chagas' disease in humans:
- a- *Trypanosoma brucei gambiense*
 - b- *Leishmania major*
 - c- *Trypanosoma cruzi*
 - d- *Trypanosoma brucei rhodesiense*
 - e- None of the above

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13- How do sporozites of the plasmodia (causing malaria) form?

- a- Result of asexual cycle in the female anopheles mosquito
- b- Result of the sexual cycle in both female and male mosquitos
- c- Result of the exoerythrocytic phase of life cycle in the parenchymal cells of the human liver
- d- Result of the sexual cycle in the mosquito and found in the salivary glands of the female anopheles mosquito
- e- None of the above

14- The correct pathogenesis pathway of the infection and development of the malaria disease in humans:

- a- Sporozites → merozites → liver parenchymal cells (asexual cycle)→ hypnozites
- b- Sporozites → blood stream → liver parenchymal cells (exoerythrocytic cycle)→ merozites → red blood cells (erythrocytic cycle)
- c- Sporozites → blood stream → liver or lung parenchymal cells (erythrocytic cycle)→ merozites → white blood cells (exoerythrocytic cycle)
- d- Sporozites → mucosal membranes → liver parenchymal cells (exoerythrocytic cycle)→ hypnozites → red blood cells (erythrocytic cycle)
- e- None of the above

15- Known as the asexual progeny, which of the following type of cell forms (according to the Apicomplexa life cycle) invades the human red blood cells and causes the erythrocytic cycle?

- a- Sporozites
- b- Merozites
- c- Hypnozites
- d- More than one of the above is correct
- e- All of the above

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- 16- How does relapse of the malaria disease occur?
- a- When sporozites survive for a long period in the blood stream and does not reach the liver
 - b- When merozites from hypnozites in liver break out reestablishing a red cell infection
 - c- When sporozites enter the blood stream
 - d- When merozites undergo erythrocytic cyle by invading red blood cells
 - e- None of the above
- 17- The vast majority of death due to malaria is caused by which of the following Plasmodium species?
- a- *P. vivax*
 - b- *P. ovale*
 - c- *P. falciparum*
 - d- *P. malariae*
 - e- All of the above
- 18- Giemsa's stain is used in laboratory tests such as the thick blood film and thin blood film. The major purpose of thick blood film diagnostic test is:
- a- Necessary for species differentiation
 - b- Allows the lab technician to detect parasites even mild infection
 - c- Allows the lab technician to detect parasitic infection only when severe
 - d- Involves chromatographic methods
 - e- None of the above
- 19- Main action of the Primaquine drug given to patients with malaria:
- a- Eliminates exoerythrocytic forms in the liver
 - b- Inhibits the growth of hypnozites
 - c- Acts to inhibit the production of merozoites
 - d- Works by a combination of more than one mechanism of the mentioned above
 - e- None of the above

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20- A coccidian protozoan of which the oocyst-producing sexual stage can only develop in cats and their relatives is:

- a- *Cryptosporidium parvum*
- b- *Toxoplasma gondii*
- c- *Plasmodium ovale*
- d- *T. brucei gambiense*
- e- None of the above

21- Which of the following is **not** a usual infection pattern for human intestinal flagellates?

- a- Food-borne
- b- Water-borne
- c- Soil-borne
- d- Blood-borne
- e- None of the above

22- Which of the following is **incorrect** regarding the general characteristics of **nematodes**?

- a- They are small rounded elongated worms
- b- They are non-segmented with a body cavity
- c- They usually don't need an intermediate host
- d- They multiply in the body since eggs hatch only there
- e- Their infection patterns vary widely

23- Which of the following is correct about worms?

- a- Hook worms: *Ancylostoma duodenale* and *Necator americanus*
- b- Nematodes are flat worms
- c- Cestoda subphyla known as hook worms
- d- *Enterobius vermicularis* is a pinworm
- e- Both A and D are correct

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24- Which of the following worms have eggs that hatch in 48 hours to give rhabditiform larva and molt to filariform larva after 2 days?

- a- *Enterobius vermicularis*
- b- *Ancylostoma duodenale*
- c- *Strongyloides stercoralis*
- d- Both B and C are correct
- e- None of the above

25- The infective stage of the Hookworms is:

- a- Eggs in feces
- b- Embryonated eggs when ingested
- c- Filariform larva penetrating the skin (usually the foot)
- d- None of the above
- e- All of the above

26- Which of the following is a whip-worm?

- a- *Trichinella spiralis*
- b- *Trichuris trichiura*
- c- *Necator americanus*
- d- *Strongyloides stercoralis*
- e- All of the above

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27- Which of the following tissue nematode belongs to the Filariidae family?

- a- *Loa loa*
- b- *Wuchereria bancrofti*
- c- *Onchocerca volvulus*
- d- *Acanthocheilonema perstans*
- e- All of the above

28- What is the infective stage of the *Tinea saginata* ?

- a- Cercariae
- b- Metacercariae
- c- Crysticercus
- d- Eggs
- e- None of the above

29- Which of the following is **not** a general characteristic of the Cestoda?

- a- Flat and ribbon-like chain of segments
- b- No mouth
- c- No digestive tract
- d- Adult worms are hermaphroditic
- e- Simple life cycle

30- Which of the following is **false** regarding infection of humans with *Taenia saginata*?

- a- It causes minimal symptoms
- b- It is a common infection resulting from uncooked beef
- c- The worm is about 6 to 7mm in **width**
- d- The adult worm could reach 4 to 8m in **length**
- e- It could reach 1 million segments known as proglottids

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31- How do the cysts form in the Hydatid worm *Echinococcus granulosus*?

- a- Ingestion of eggs lead to cysts containing larvae to develop, usually in the liver and lungs in humans
- b- Penetration into the human skin by the eggs, usually in the feet or hands, cause eggs to hatch in the body to develop larvae then cysts
- c- Ingestion of larvae by drinking contaminated water usually containing copepods, which encyst in the human body, primarily in the brain
- d- Penetration into the skin by the trophozoites, where they encyst later in the life cycle
- e- None of the above

32- Which of the following is known as the smallest **AND** commonest tape worm found in the small intestine of humans?

- a- *Diphyllobothrium latum*
- b- *Hymenolepis diminuta*
- c- *Taenia saginata*
- d- *Hymenolepis nana*
- e- *Taenia solium*

33- Which of the following is known as the **longest tapeworm** in humans?

- a- *Diphyllobothrium latum*
- b- *Hymenolepis diminuta*
- c- *Taenia saginata*
- d- *Hymenolepis nana*
- e- *Taenia solium*

34- Some tapeworms require no intermediate hosts to develop, while others might require one or two during their normal life cycles. Which of the following tapeworms require two intermediate hosts?

- a- *Echinococcus granulosus*
- b- *Diphyllobothrium latum*
- c- *Hymenolepis nana*
- d- *Hymenolepis diminuta*
- e- B and D

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35- Worms undergo different life cycles during their development. Which of the following is **incorrect** regarding the events of the life cycle of the Trematodes (known as flukes)?

- a- Fertilization may occur between two worms OR self-fertilization
- b- They all undergo a complex asexual reproductive phase – larval stages in a snail (1st intermediate host)
- c- Eggs hatch in freshwater → miracidium (1st larval form) is released → it swims out to find a snail → development → cercariae (final larval stage) → penetrate 2nd intermediate host and may encyst as metacercariae
- d- Miracidium is not an infective stage
- e- Miracidium, cercariae and metacercariae are known as infective stages.

36- How does infection occur from *Dracunculus medinensis* (Guinea worm)?

- a- When the worm enters the subcutaneous tissue and hatches the eggs there
- b- When the person swallows water fleas (Copepods) that ingested the larvae of the worm
- c- When the person swallows water fleas (Copepods) that ingested the eggs of the worm
- d- When the worm penetrates the skin, usually the feet or hands
- e- All of the above could cause infection

37- Which of the following are commonly known as **blood flukes**?

- a- Schistosoma species
- b- Fasciolidae species
- c- Heterophyidae species
- d- Bilharzidae
- e- A and D

38- Which of the following is not a liver fluke?

- a- *Fasciola hepatica*
- b- *Fasciola gigantica*
- c- *Fasciolopsis buski*
- d- *Clonorchis sinensis*
- e- None of the above

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39- Where do the adult worms of the Schistosomatidae parasitize in the human body?

- a- Intestines
- b- Liver and lungs
- c- Liver only
- d- Lungs only
- e- Mesenteric blood vessels

40- Which of the following species of Schistosoma has an egg with a small curved **rudimentary** spine?

- a- *S. haematobium*
- b- *S. mekongi*
- c- *S. japonicum*
- d- *S. mansoni*
- e- All of the above