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
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 *trophozite* 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
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 cycle 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 oocyt-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: Ancylostoa 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
24- Which of the following worms have eggs that hatch in 48 hours to give rhabtidiform larva and molt to filariform larva after 2 days?

a- *Enterobius vermicularis*
b- *Ancylostoa duodeneale*
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 trophozites, 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- *Hymelolepis nana*  
e- *Taena solium*

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

a- *Diphyllobothrium latum*  
b- *Hymenolepis diminuta*  
c- *Taenia saginata*  
d- *Hymelolepis nana*  
e- *Taena 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- *Hymelolepis 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 (1\textsuperscript{st} intermediate host)  
c- Eggs hatch in freshwater \(\rightarrow\) miracidium (1\textsuperscript{st} larval form) is released \(\rightarrow\) it swims out to find a snail \(\rightarrow\) development \(\rightarrow\) cercariae (final larval stage) \(\rightarrow\) penetrate 2\textsuperscript{nd} 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 \textit{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 \textbf{blood flukes}?

a- \textit{Schistosoma} species  
b- \textit{Fasciolidae} species  
c- \textit{Heterophyidae} species  
d- \textit{Bilharzidae}  
e- A and D

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

a- \textit{Fasciola hepatica}  
b- \textit{Fasciola gigantic}  
c- \textit{Fasiolopsis buski}  
d- \textit{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 {\it rudimentary} spine?

a- \textit{S. haematobium}
b- \textit{S. mekongi}
c- \textit{S. japoncium}
d- \textit{S. mansoni}
e- All of the above