Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2021

Course: Fungi, Algae and Protista — **Semester: III**
Program: B.Sc. Microbiology — **Time: 03 hrs.**
Course Code: HSMB2001 — **Max. Marks: 100**

Instructions: Read question carefully.

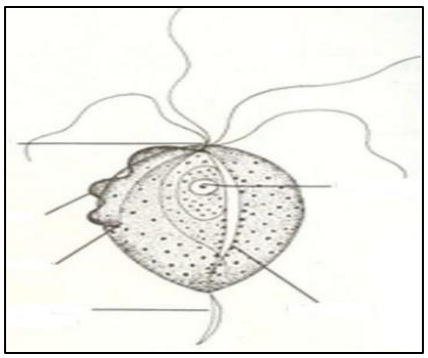
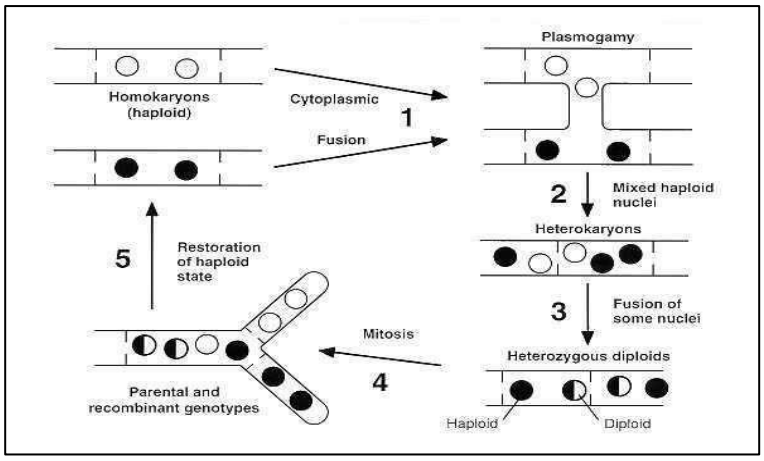
SECTION A

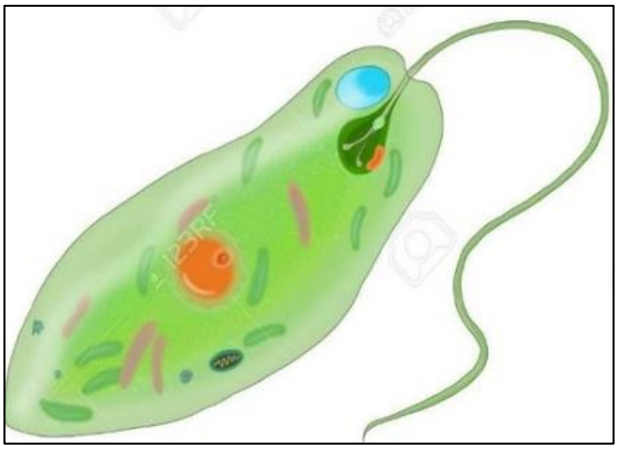
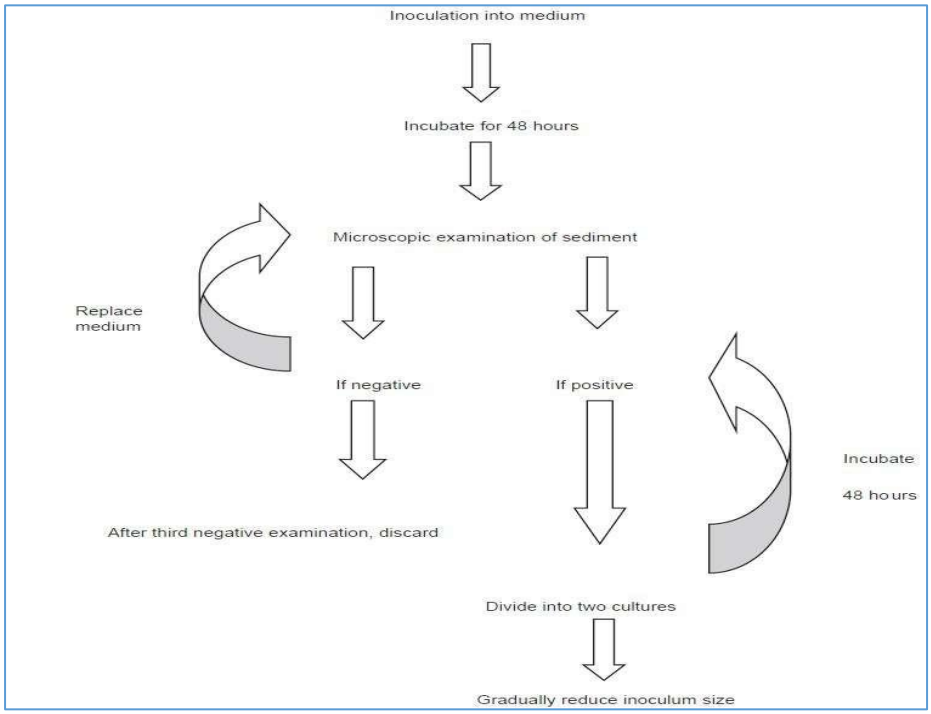
S. No.	MCQ's /Fill in the blanks/ T&F (1.5 marks each)	**30 Marks**	**CO**
1	Vector for Leishmaniasis is_____ A. Tick B. Mite C. Sand fly D. Tsetse fly	**1.5**	**CO3**
2	Fungi producing mycelium are called as_____ A. Moulds B. Filamentous fungi C. Both a and b D. Yeasts	**1.5**	**CO2**
3	*Phycomycetes* are belongs to A. Sac fungi B. Lower fungi C. Club fungi D. Imperfect fungi	**1.5**	**CO2**
4	The strain of fungi used for the large-scale production of penicillin is_____ *A. Penicillium chrysogenum* *B. P. notatum* *C. Streptomyces Aurecus* D. *Saccharomyces sps*	**1.5**	**CO4**

5	The study of algae is known as A. Algalogy B. Phycology C. Mycology D. Bacteriology	**1.5**	**CO4**
6	In *Mucor*, asexual reproduction takes place by A. Spores B. Zygopore C. Motile zoosporess D. Zoogametes	**1.5**	**CO4**
7	In lichens, sexual reproduction belongs to A. Either fungal partner or Algal partner (not both) B. Fungal partner and Algal partner (both) C. Fungal partner only D. Algal partner only	**1.5**	**CO2**
8	Yeast produces_____enzyme complex that is responsible for fermentation. A. Invertase B. Aldolase C. Zymase D. Dehydrogenase	**1.5**	**CO4**
9	Heterokaryosis process was discovered by_____.	**1.5**	**CO5**
10	Which statements is wrong about lichens? A. They grow rapidly about 2 cm per day B. They have symbiotic relationship between alga and fungus C. Lichens are indicators of pollution D. Some species are eaten by reindeers	**1.5**	**CO3**
11	Pseudomycelium is formed in A. Yeast B. *Aspergillus* C. *Synchytrium* D. *Rhizophora*	**1.5**	**CO4**

12	Protists include A. Bacteria, fungi, algae and Bryophyta B. Protozoa, algae and fungi C. Vascular plants, slime moulds, and fungi D. Bacteria, algae, protozoa, and Bryophyta	**1.5**	**CO4**
13	Which class does the malarial parasite belong to? A. Dinophyceae B. Sarcodina C. Ciliata D. Sporozoa	**1.5**	**CO1**
14	Protozoa are classified based on A. Locomotory organelle B. Shape C. Number of nuclei D. Size	**1.5**	**CO1**
15	Which of the following amoeba does not live in large intestine? *A. Entamoeba coli* *B. Entamoeba histolytica* *C. Endolimax nana* D. *Entamoeba gingivalis*	**1.5**	**CO1**
16	Organ of defense in protozoans is A. Statocysts B. Trichocysts C. Otocysts D. Nematocysts	**1.5**	**CO1**
17	The largest protozoa is – *A. Balantidium coli* *B. Entamoeba coli* *C. Trichomonus vaginalis* D. *Toxoplasma gondii*	**1.5**	**CO1**

18	Wet mount slide preparations are used in microbiology as they allow to see A. Size and shape of individual organisms B. Characteristic arrangement or grouping of cells C. Motility of the organism D. All of these e. None of these	**1.5**	**CO1**
19	Compound microscope was discovered by A. Antony von B. Pasteur C. Johnsen & Hans D. None of these	**1.5**	**CO1**
20	In diatoms, auxospores helps in A. Metabolism B. Reproduction C. Spore formation D. Growth	**1.5**	**CO3**
	SECTION B (5 marks each question)		
Q	Short Answer Type Question (5 marks each) Scan and Upload 4 questions 5 marks. Word limit (100-120)	**20 Marks**	**CO**
1	Write down the life cycle of *Leishmania donovani* through schematic diagram.	**5**	**CO2**
2	Write a note on mode of reproduction in Lichens.	**5**	**CO3**
3	Write down the implication of parasexuality in fungal strain development.	**5**	**CO1**
4	Write down signs and symptoms of Malaria. Name three drugs, used to treat Malaria.	**5 (2+3)**	**CO1**
	SECTION C 30 marks		
Q	**Two case studies 15 marks each subsection**	**30 Marks**	**CO**
1	Case Study 1 (Word limit-250-300)	**15 (2+2+2+ 3+2+4+1)**	**CO1**

	 **Q1:** Identify the pathogen from the above images. **Q2:** Name of indicated cell structures. **Q3:** What disease it causes? **Q4:** How the disease transmitted to human? **Q5:** How the infection can be diagnosed?		
2	Case Study 2 (Word limit- 250-300)  **Q1:** What process is shown in figure? **Q2:** Which organism undergoes through this process during their life cycle? **Q3:** Describe the process in brief. (Word limit: 120) **Q4:** What is the significance of this process? **Q5:** Name two important antibiotics producing microorganisms?	**15 (2+2+5+ 3+3)**	**CO5**
	SECTION- D 20 marks		

Q	Long Answer type Questions Scan and Upload (10 marks each) Word limit 200-250	**20 Marks**	**CO**
1	 **Q1:** Identify the organisms from above image in figure? **Q2:** Describe their cell structure in brief? (word limit: 140) **Q3:** Mention their mode of nutrition. **Q4:** Mention their motility process?	**10 (2+4+2+ 2)**	**CO4**
2		**10 (2+4+2+ 2)**	**CO3**

	Q1: What methods are described in the flow diagram? **Q2**: Define the term (with examples): Axenic, Monoxenic and Polyxenic. **Q3**: Name of the medium used for the in-vitro cultivation of *Leishmania* sp. is _____. **Q4**: Which organism cultured by this method?		