

KATHMANDU UNIVERSITY
End Semester Examination
August/September, 2017

Mark Scored:

Level : B. Sc.

Year : II

Course : HBIO 215

Semester : II

Exam Roll No. :

Time: 30 min

F. M. : 20

Registration No.:

Date :

SECTION "A"

[10Q × 0.5 = 5 marks]

Choose and tick [✓] the most appropriate answer.

1. Cryptococcus neoformans falls under which:
 Deuteromycota Ascomycota Zygomycetes Basidiomycota
2. Ringworm infection of scalp is known as:
 Tinea corporis Tinea capitis Tinea favosa Tinea barbae
3. Which of the following is known as "Rose grower's Disease":
 Chromoblastomycosis Sporotrichosis
 Mycetoma Rhinosporidiosis
4. Asexual spore contained within hyphae is called:
 Chlamyospore Arthrospore Blastospore Conidiospore
5. Appearance of fungus as "captain's wheel" is the characteristic of?
 Coccidioidomycosis Paracoccidioidomycosis
 Histoplasmosis Cryptococcosis
6. Virus can derive its envelope from Host's:
 Cell membrane Endoplasmic reticulum
 Nuclear membrane All of the above
7. Maximum size of particles that can reach lungs:
 10 μm 5-10 μm 20 μm 5 μm
8. Vaccine for small pox was made from:
 Cowpox Monkeypox Sheeppox Swinepox
9. Which of the following is RNA virus?
 Adeno virus Retro virus Papovavirus Hepatitis B
10. CD4 count during AIDS is:
 < 350/μl < 400/μl < 200/μl < 500/μl

SECTION "B"

[10Q × 0.5 = 5 marks]

Fill in the blanks:

11. Reproductive part of mushroom is known as _____
12. Cell wall of fungi is largely composed of _____
13. _____ pathogens cause disease in individuals with compromised host defense mechanisms.
14. Genera _____ causes infections on skin, hair, and nails.
15. _____ agar is used for primary recovery of saprophytic and dimorphic pathogenic fungi.
16. _____ are at the vertices of the icosahedrons symmetry of viral capsid.
17. Time elapsed from initial entry and disassembly of the parental virus to the assembly of the first progeny virion is _____
18. During the production of vaccine of influenza virus, culture is primarily done in _____ of chick embryo.
19. Cell surface receptors responsible for binding of HIV are _____ and _____.
20. Benign Warts are mainly caused by _____ Virus.

SECTION "C"

[10Q. × 1=10 marks]

Define in one sentence:

21. Hyphae:
22. Arthrospore:
23. Endothrix:
24. Papule:
25. Black grain:
26. Capsid:
27. Proto-Oncogenes:
28. Inclusion Bodies:
29. Viremia:
30. Transformation:

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SECTION "D"

(Long answer questions)

[4Q. × 7 = 28 marks]

Answer ANY FOUR questions.

1. Describe the process of mushroom cultivation.
2. Give all the classes of Baltimore classification along with their characteristics.
3. Briefly explain various steps in viral replication cycle.
4. Write briefly on specimen types and collection in laboratory diagnosis of fungal disease.
5. Classify the fungal disease based on site of infection with their general characteristics.

SECTION "E"

(Short answer questions)

[5Q. × 4 = 20 marks]

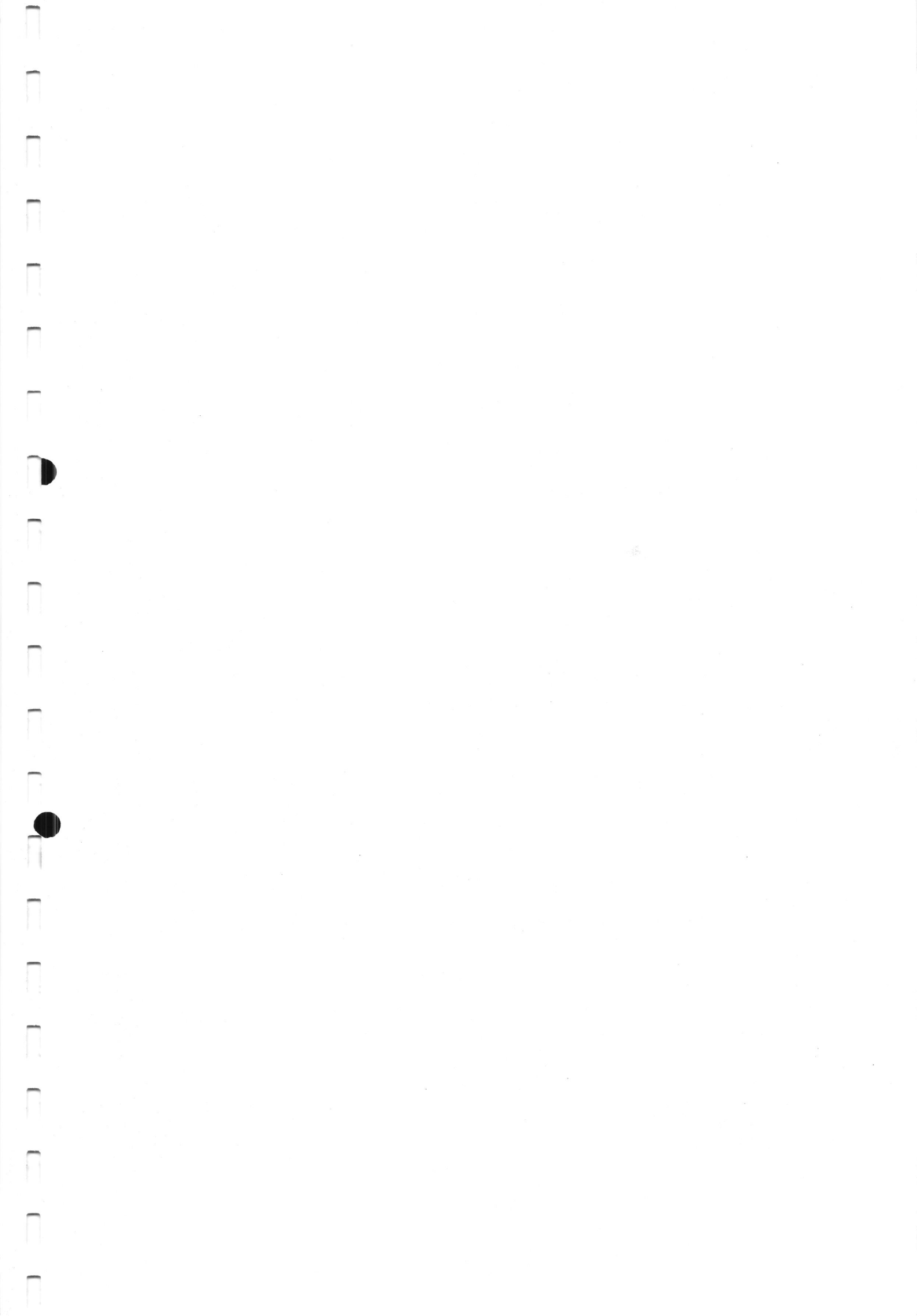
Answer ANY FIVE questions.

6. Write short note on important diagnostic tests for hepatitis B based on antigen/antibody present in blood.
7. Write briefly on Tinea pedis.
8. Write short note on use of tissue culture in diagnostic virology.
9. Briefly describe the mechanisms of viral oncogenesis.
10. Briefly describe the general characteristics and pathology of systemic mycosis.
11. Briefly describe fungal reproduction.

SECTION "F"

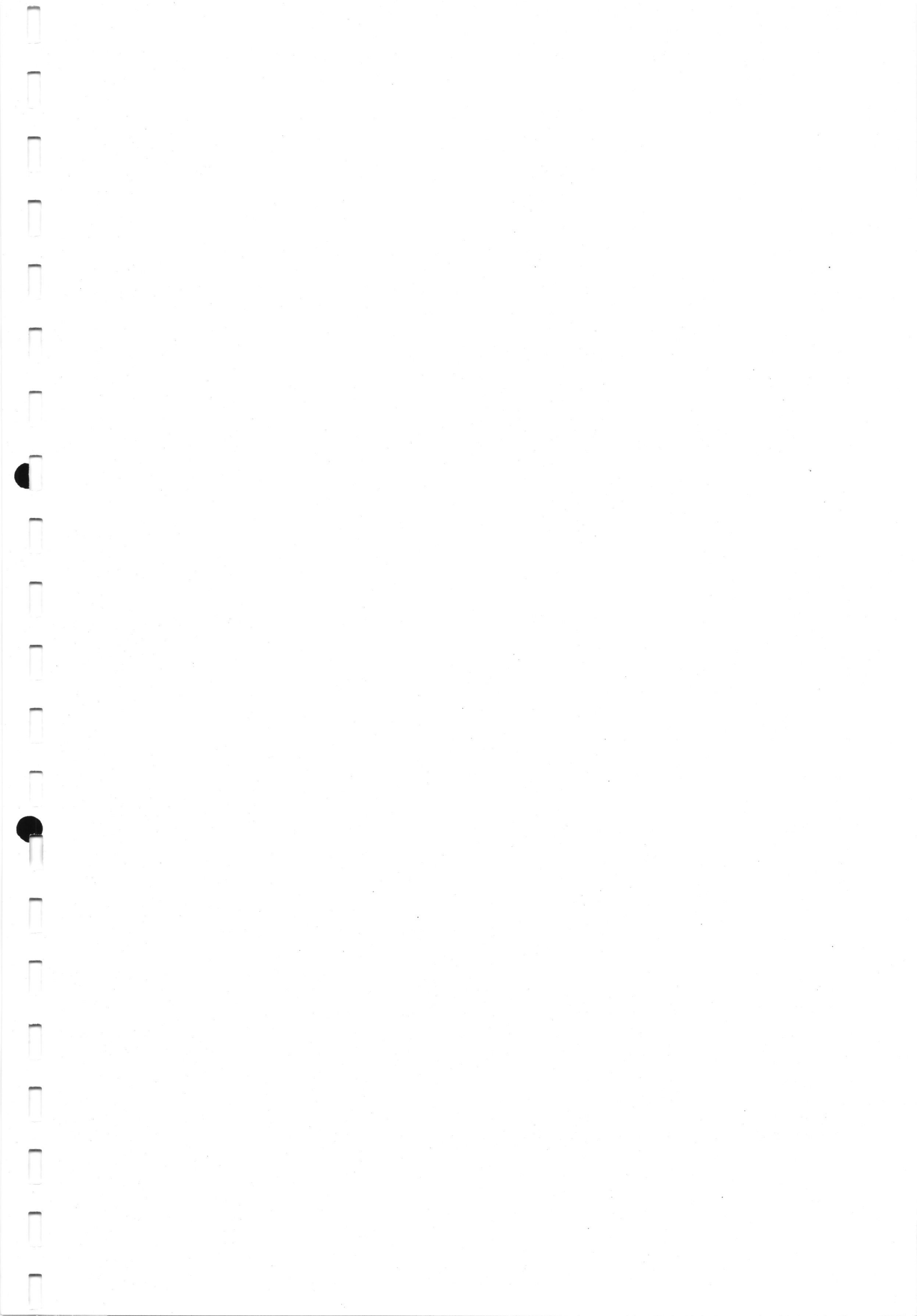
Differentiate between:

12. Culture of fungi and virus. [4]
13. Herpes Simplex virus I and II. [3]



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16. The spectral notation for sodium D_1 line is _____
17. The energy of anti-bonding orbital is increased by an amount Δ , known as _____
18. The ground state vibrational energy of a diatomic molecule in terms of its reduced mass μ and force constant k is _____
19. In STM, the scanning resolution is about _____ in xy-direction and _____ in z-direction.
20. The hologram does not contain a distinct image of the object but carries a record of both _____ of the light at each point.



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