

# MIMER MEDICAL COLLEGE, TALEGAON D

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### Re-test and Answer sheets

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**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams - Anatomy**


<b>Year</b>	<b>No. of students</b>	<b>Answer sheets</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	04	Yes
2017- 2018	05	Yes
2016- 2017	01	Yes

  
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**Consolidated report on retest exams – Physiology**

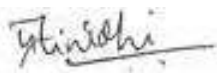
<b>Year</b>	<b>No. of students</b>	<b>Answer sheets</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	03	Yes
2017- 2018	Nil	Nil
2016- 2017	02	Yes

  
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### Consolidated report on retest exams -Biochemistry

Year	No. of students	Answer sheets.
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	03	Yes
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil

  
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## MIMER Medical College, Talegaon (D)

### Consolidated report on retest exams - Pharmacology

Year	No. of students	Answer sheets
2020-2021	Nil	Nil
2019-2020	10	yes
2018-2019	4	yes
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil



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Jyoti

Sub - Pharmacology - Paper I

Vidyalekhan

15/6/2020

'MCO'S'

Section A

(1) A

(2) A

(3) A

(4) B

(5) A

(6) A

(7) D

(8) C

(9) D

(10) B

(11) D

(12) D

(13) D

(14) A

(15) C

(16) B



## Section B

(Q1)

Teratogenicity :- (a) It means the ability of a drug to cause foetal abnormalities when administered to a pregnant lady.

The placenta does not strictly constitute a barrier and any drug can cross it to a greater or lesser extent.

(b) The type of malformation depends on the drug as well as stage of pregnancy during which the foetus was exposed to the teratogen.

(c) Most vulnerable period is from 15<sup>th</sup> to 60<sup>th</sup> day of gestation. This is the period of organogenesis during which if the foetus is exposed to a teratogenic drug, it can cause various defects in organ formation. Some of the proven human teratogens are -

(d) Thalidomide, corticosteroids, phenytoin, warfarin, tetracyclines, valproate etc.

(e) Other drugs may be low grade teratogens & in many cases conclusive evidence may be lacking. It is therefore, advised to avoid all drugs during pregnancy unless strict indications exist for their use.



(2)

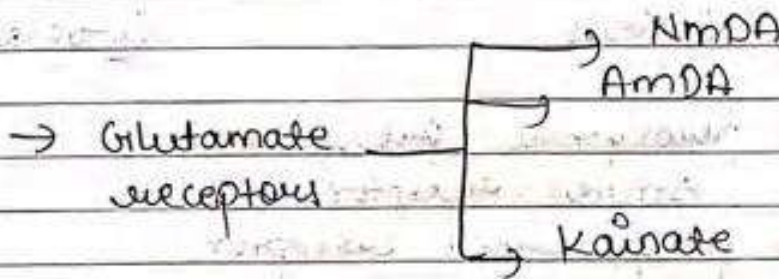
Receptors :-

Different types of receptors

- (a) Ligated gated ion channel receptors
- (b) Enzyme linked receptors
- (c) nuclear receptors
- (d) G-protein coupled receptors.
- (e) Subtypes of subunit :-  $G_{15}$  &  $G_{1q}$ .
- (f) Subtypes of  $\alpha$  subunit :-  $G_{11}$ ,  $G_{10}$ ,  $G_{12/13}$ .

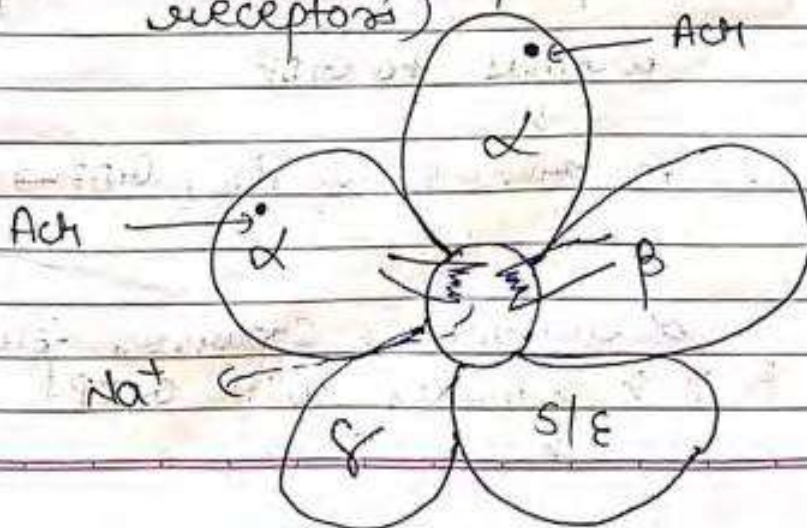
(a) Ligated gated ion channel receptors :-  
fastest acting receptors

examples  $\rightarrow$  GABA



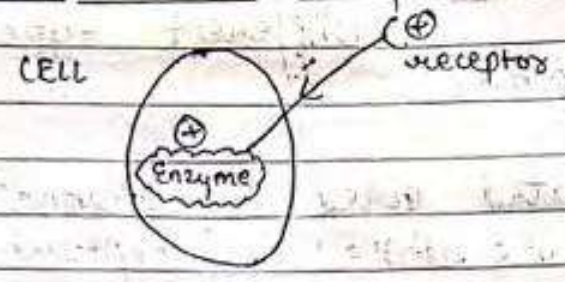
$\rightarrow$  5HT<sub>3</sub>

$\rightarrow$  nicotinic receptors (muscarinic receptors)





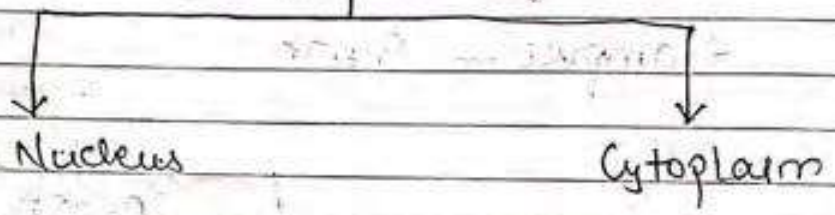
(b) enzyme linked receptors



examples :-

- Tyrosine Kinase receptor
- Janus Kinase receptor
- Guanylate Cyclase receptor
- Serine / Threonine Kinase receptor

(c) Nuclear receptors



- paroxysmal proliferator
- estrogen receptor
- progesterone receptor

(d) G-protein coupled receptor

$\alpha$  binds to GDP



in presence of  $P_{ou}$ ,  $GDP \rightarrow GTP$



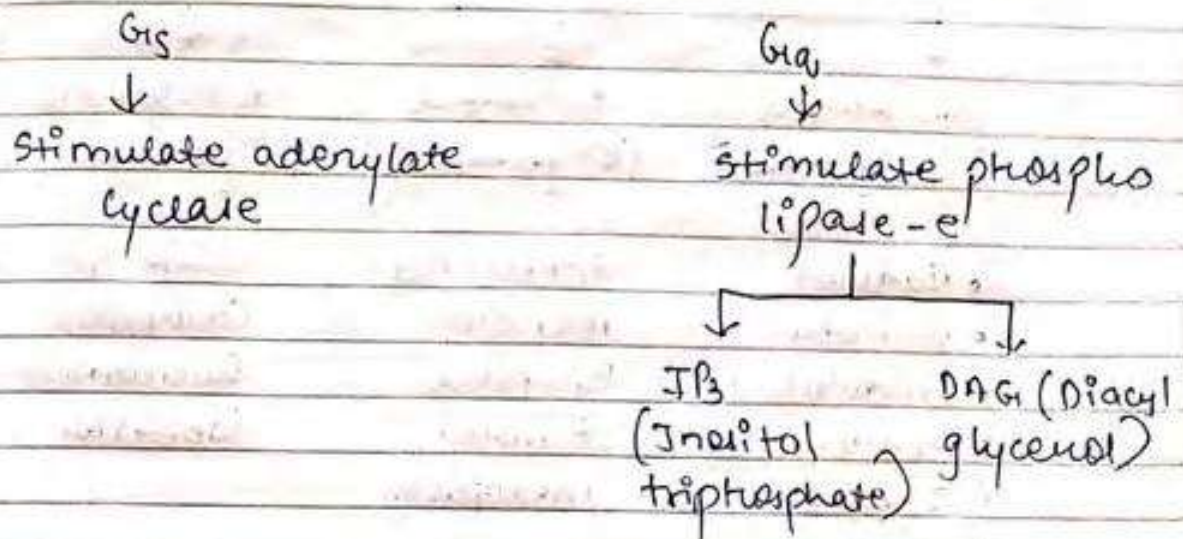
$\alpha$  subunit is separated from  $\beta \gamma$  & moves with GTP





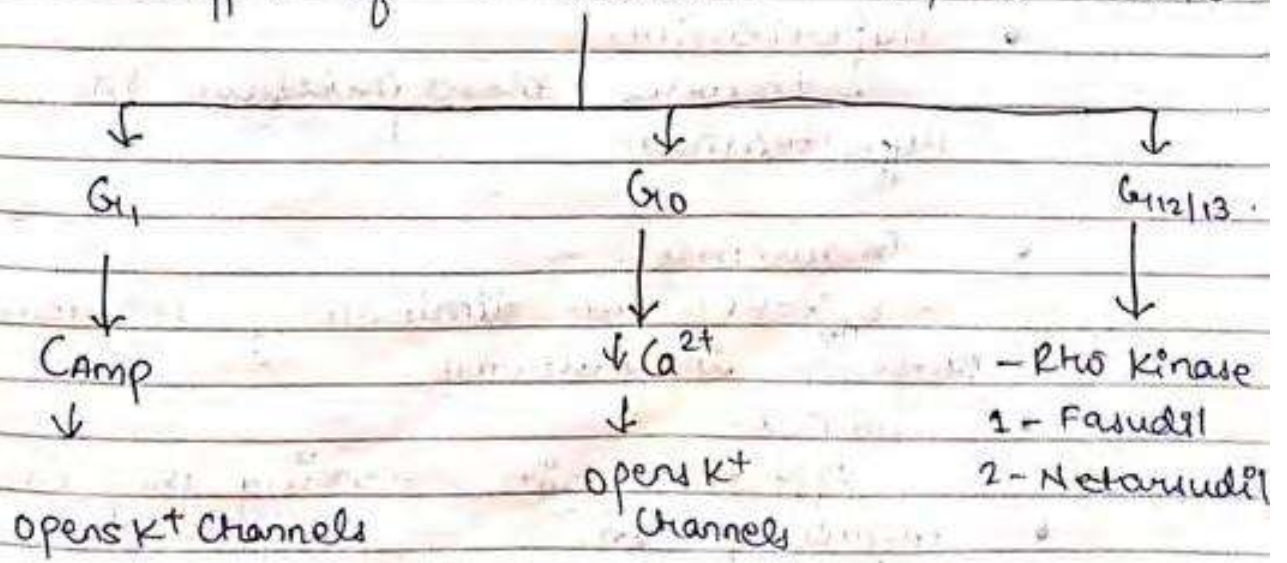
$\alpha$  has GTPase activity,  $PO_4$  is removed by breakdown.

Subtypes of subunits :-  $G_{12}$  &  $G_{13}$ .



examples  $\beta_2$  receptors  
 → present in smooth, cardiac & skeletal muscles

Subtypes of  $\alpha$  subunits :-  $G_{11}$ ,  $G_{10}$  &  $G_{12/13}$ .

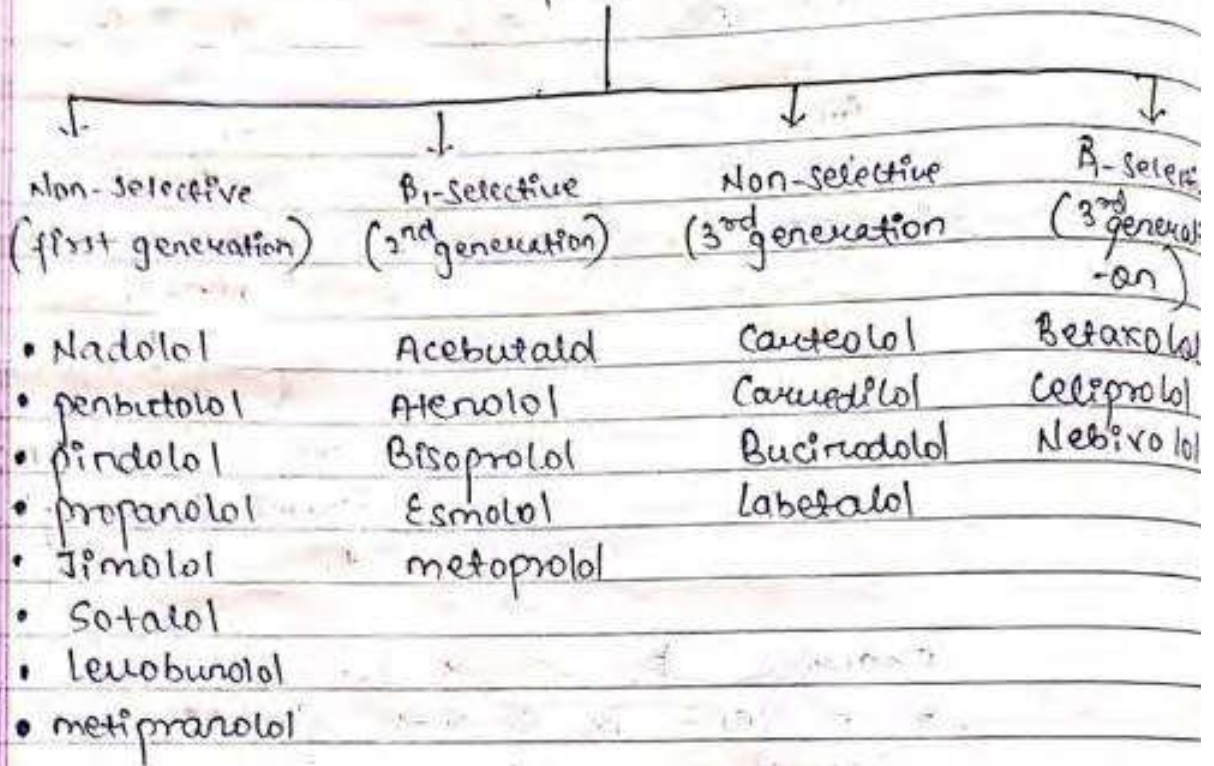




(3)

Classify  $\beta$  blockers

$\beta$  receptor antagonist



4 uses of propranolol

- Hypertension:-  
- Lower blood pressure in hypertension.
- Glaucoma:-  
- Effective in diminishing intraocular pressure in glaucoma
- migraine  
Effective in reducing migraine
- Angina pectoris  
- useful in the chronic management of angina
- myocardial infarction

- protective effect on the myocardium.



(5)

HEPARIN

WARFARIN

(1) Affects the intrinsic pathway

(1) Affects the extrinsic pathway

(2) Inactivates thrombin & factor Xa

(2) Inhibits synthesis of clotting factors

(3) IV or sub Q

(3) PO

(4) Does not cross placenta or into breast milk

(4) Crosses placenta (teratogenic)

(5) rapid (minutes)

(5) slow (hours)

(6) Brief (hours)

(6) prolonged (days)

(7) few drug interactions

(7) many drug interactions

(8) eliminated renally

(8) Eliminated hepatically

(9) aPTT

(9) PT

(10) protamine

(10) phytonadione (Vitamin K)

(11)



(6) Scabies :-

(1) permethrin :- mealy

nearly 100% cure rates single application needed in the most cases, resistance is very rare. first choice during first outbreak. few patients may experience mild & transient burning, itching, tingling, erythema or rash.

(2) Gamma benzene Hexachloride :-

84-92% cure rate. resistance can develop. can be absorbed through the skin & cause systemic toxicity - CNS stimulation, vertigo, convulsions & cardiac arrhythmias.

(3) Benzyl Benzoate - 75-100% cure  
rates. minimally absorbed through the skin. systemic toxicity is low but neurological symptoms have occurred in children - contraindicated in them. skin irritation, contact dermatitis can occur.

(4) Ivermectin - only orally administered drug used in scabies. well tolerated. Not to be given to children < 5yrs, pregnant & lactating women.

(5) Cromatin - Lower cure rates (60-85%) can be improved by extended 5 day application in children. Low systemic toxicity despite absorption through the skin - may be preferred for children.



'Section C' 'LAQ'S'

(Q2)

Classification of drugs used in peptic ulcer :-

(1) Those which reduce gastric acid secretion :-

a - H<sub>2</sub> receptor blockers - Cimetidine, ranitidine, famotidine, loxatidine.

b - proton pump inhibitors -  
omeprazole  
lansoprazole  
pantoprazole

c - Anticholinergics :-  
pirenzepine  
jelenzepine  
propantheline

d - prostaglandin analogues :-  
misoprostol, enprostil

(2) Those which neutralize gastric acid (antacids)

a - Systemic - Sodium bicarbonate



b- non-systemic - magnesium hydroxide  
magnesium carbonate  
magnesium trisilicate  
Aluminium hydroxide  
gel.

(3) ulcer protectives -

Sucralfate

Colloidal bismuth subcitrate

(4) ulcer protectives -

(4) ulcer healing drugs -

Cabergoxolone sodium.

(5) Anti-*H. pylori* drugs -

Amoxicillin,

clarithromycin,

metronidazole

Tinidazole.

(\*) Omeprazole & omeprazole is an proton pump inhibitor

- Omeprazole inhibits the final common step in gastric acid secretion by inactivating the proton pump ( $H^+K^+ATPase$ ) irreversibly. This leads to a dose dependent suppression of gastric acid secretion.



- The oral absorption of omeprazole is about 50% which increases with increase in gastric pH.
- Inhibition of HCl secretion occurs within 1 hr. reaches maximum at 2 hrs, is still half maximal at 24 hrs & lasts for 3 days.

Uses :-

- peptic ulcer - omeprazole 20 mg OD, equally or more effective than H<sub>2</sub> blockers & duodenal ulcer
- 2-4 weeks & gastric ulcers
- 4-8 weeks

Faster healing occurs at 40 mg/day. It is also an important component of anti-H pylori therapy.

Gastroesophageal reflux disease.

Dose - 20-60 mg OD  
produces rapid symptom relief, more effective than H<sub>2</sub> blockers

Zollinger-Ellison Syndrome.

It is a gastric hypersecretory state due to a rare tumor secreting gastrin. High doses of omeprazole, 60-120 mg/day are often required for healing of ulcers.



adverse effects -

- GIT upset, headache
- severely leucopenia, hepatic dysfunction
- prolonged use may cause purple  
- gastrenchemia due to long lasting acid  
suppression.
- inhibits oxidation of certain drugs.



(3)

### Bioavailability :-

It measures the fraction of drug that reaches the systemic circulation.

→ Following factors affect the bioavailability of drugs :-

(a) route :- I.V route the bioavailability is 100%

if the drug is given orally the bioavailability is generally affected like

(i) The amount of drug absorbed.

(ii) first pass metabolism.

(iii) amount of drug reaching the circulation

(b) particle size :-

The smaller the size of the particle, the more of it gets disintegrated & dissolved.

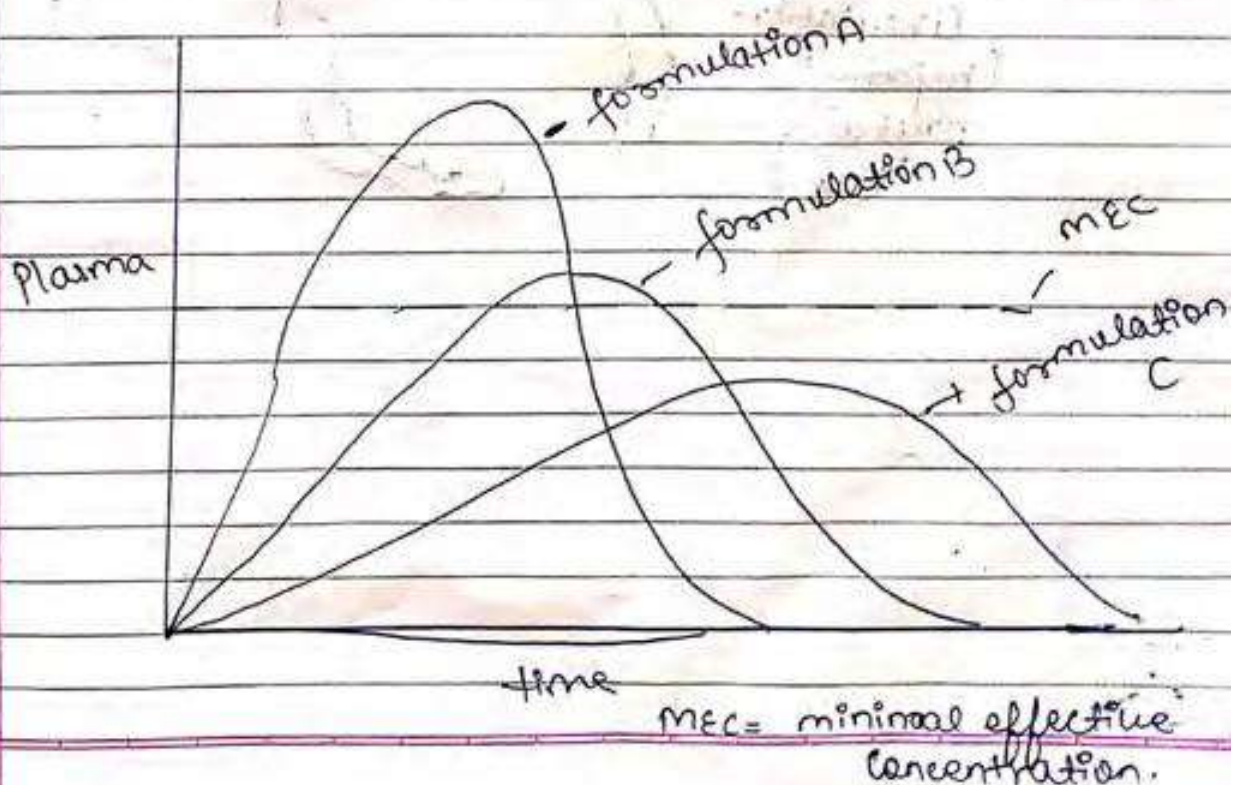
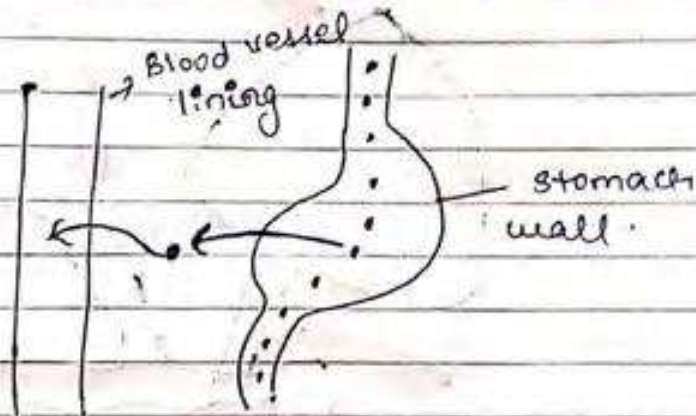
The ions are formed & they reach the systemic circulation



lipid soluble :- lipid soluble molecules are easily absorbed.

lipid - soluble drugs are present in non-ionized form & they pass the stomach lining & also cross the blood vessels

water - soluble drugs are present in ionized form & they do not cross the stomach lining & also cross the blood vessels.

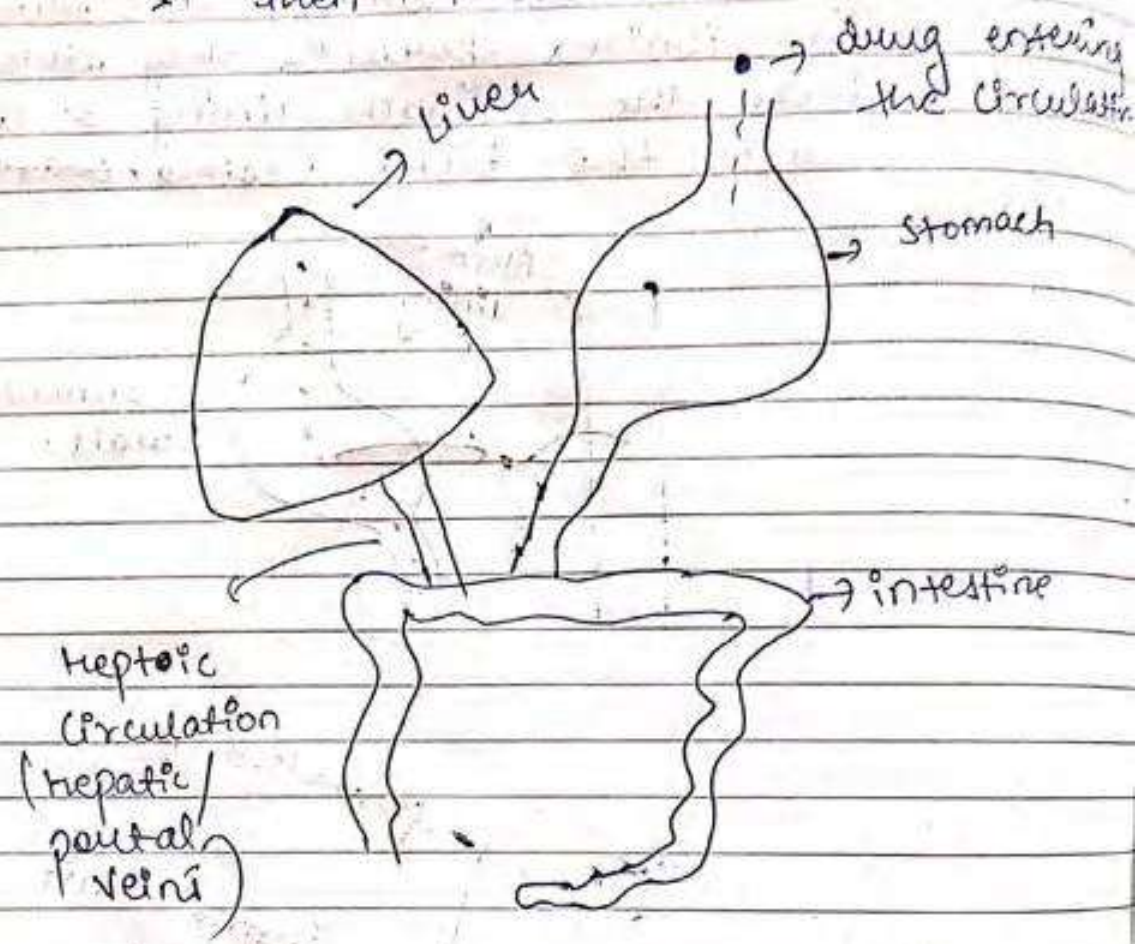




Systemic Circulation

drug enters the ~~stomach~~ stomach  
& then entering the intestine  
& from the hepatic circulation  
it enters the liver.

& then the blood



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Impetol

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PAGE 1

(A)

'MCQ'S'

(1) A

(2) D

(3) C

(4) D

(5) C

(6) A

(7) B

(8) B

(9) C

(10) D

(11) A

(12) D

(13) A

(14) D

(15) B

(16) B



## 'Section B'

(Q2)

(1)

Adverse drug effects / reactions of NSAID :-

(a) Reyes Syndrome :-

Reyes Syndrome is caused by aspirin in children which are recovering from viral infection

e.g. flu, cold, chicken pox

(b) ∴ Aspirin is contraindicated in children as antipyretic.

- Aspirin causes inhibition of fatty acid in liver, in children causing viral illness.

(b) Hepatotoxicity :-

Acetaminophen causes hepatotoxicity

- Naproxen NAPOI metabolite depletes glutathione which is a free radical scavenger, which causes centrilobular necrosis with peripheral smearing.

(c) Indometacin :-

Causes nephrotoxicity, pancreatitis, diarrhoea

(d)

GIT :- nausea & vomiting most commonly caused by diclofenac which is treated by proton pump



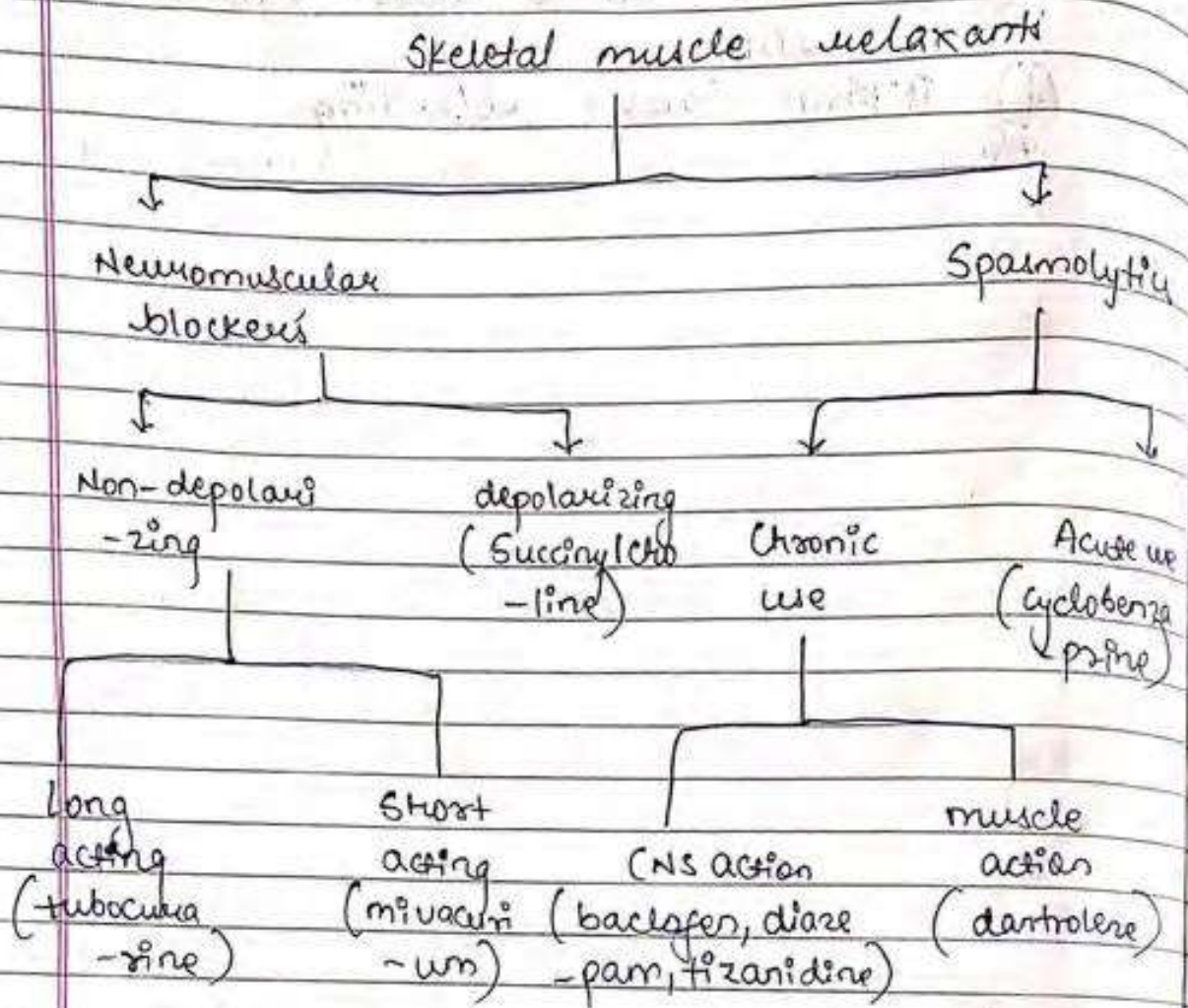
Inhibitor,

(e) PCM also causes renal tubular necrosis.

(f) Aspirin causes bleeding

~~(g)~~

(2) Classification of skeletal muscle relaxant :-



(\*) Succinyl Choline

It is skeletal muscle relaxant acting by producing depolarization block at motor end plate. The relaxation is produced in following case

Drug occupies the receptors prolonged depolarization inactivation of Na<sup>+</sup> channels  
 ↓  
 Failure of prolonged → Flaccid paralysis.



The block in many species develops in 2 phases

Phase I Block - classical depolarization blockade (rapid onset)

Phase II Block - desensitization of Nm receptor to ACh (slow onset)

Other actions :-

- (1) Causes ganglionic stimulation by agonistic action on nicotinic receptors.
- (2) Variable Cardiovascular effects depending upon sympathetic or parasympathetic predominance.

Cardiac arrhythmias or arrest particularly in digitized patients.

uses :-

- (1) As adjuvant to general anaesthetics specially in thoracic & abdominal surgery.
- (2) Brief procedures - laryngoscopy, tracheal intubation, reduction of fractures etc
- (3) To avoid convulsions & trauma during ECT (electro convulsive therapy)



(3) Acyclovir :-

- Acyclovir is A Antiviral drug
- It is nucleoside analogue  
GNA (Inhibit TK & DNA poly  $\alpha$ )
- mutation at TK & DNA poly  $\alpha$   
& Impair TK  $\alpha$  production  
Causes resistance
- Acyclovir Causes will not cure  
herpes but it can lessen the  
symptoms of infection.
- Acyclovir used to treat herpes  
→ Viruses - such as genital herpes,  
Cold sores, shingles & chickenpox.

→ It can treat herpes zoster  
that is varicella zoster virus  
infection

→ Side effects :-

→ Crystalluria/ obstructive renal  
failure, hypotension, seizures  
bone marrow suppression.

→ nausea, vomiting, headache, dizziness,  
tiredness, muscle joint ache, visual  
changes

dose :-

it can be given 2-5 times a day  
400mg, 5 doses per day for active  
infection

2 doses per day for suppressive



(4) Methotrexate :-

- Methotrexate is antifolate drug
- It is an S-phase inhibitor
- MOA :- inhibits DHFR
- decreases purine synthesis
- decreases bone marrow
- toxicity to lymphocytes which is anti-inflammatory which is used in RA

→ MOR - DHFR → Enzyme-induction less than 24 hrs  
→ Gene-amplification / mutation (> 24 hrs)

uses -Antineoplastic uses :-

- Drug of choice choriocarcinoma
- DOC (Dose limiting) carcinomatous meningitis
- then leukemia, oste
- osteosarcoma
- Non

Non-neoplastic uses :-

- DOC for RA it is anchor drug
- DOC it is more deumic, psoriasis
- DOC psoriatic arthritis.
- multiple sclerosis ectopic pregnancy.

Side effects :-

(1) Nephrotoxic → Crystaluria

↓  
prevent

methotrexate  
andic drug

↓

Bicarbonate

(2) Hepatotoxic → Cirrhosis → long term use

↓  
R.A  
psoriasis

(3) B.M ↓

(4) Collection in spaces →  
released slowly

↓

prolonged BM ↓

(5) intrathecal → meningismus  
Route → Arachnoiditis

(6) Allergic interstitial pneumonitis

C.I :- (1) Renal failure

↓

may be used in Colicarpidae

↓

metabolise into

compound excreted by liver



(5) Classification of drugs used in parkinsonism diseases :-

- (a) Dopamine precursor - Levodopa.
- (b) Dopaminergic agonists - Bromocriptine, Lisuride, pergolide, Apomorphine, Piribedil.
- (c) peripheral decarboxylase inhibitors - Carbidopa, Benserazide.
- (d) Releasing dopamine - Amantidine.
- (e) MAO-B inhibitor - Selegiline.

(2) Central anticholinergic agents -

- (a) Trihexyphenidyl (Benhexol), procyclidine, Benztropine.
- (b) Antihistaminic with anticholinergic action - promethazine, Diphenhydramine.

(\*) Management of parkinsonism disease

(1) Supportive therapy :-

Can make living with parkinson disease easier & help you to deal with your symptoms on day to day basis.



\* Physiotherapy :-

- Aims to make moving easier & improve walking & flexibility
- release muscle stiffness & movement
- manipulations & exercise
- \* speech & language therapy
- \* diet advice.
- to avoid constipation.

\* Medications :-(1) Levodopa

- precursor of dopamine
- first drug start is with MAO-B inhibitor or dz agonist
- Always combine Carbidopa with levodopa.
- inhibits peripheral decarboxylation
- can be combined with COMT inhibitors increases bioavailability of levodopa.
- there are some side effects of levodopa :-
  - psychosis
  - vomiting
  - dyskinesia

Contraindications :- absolute psychosis  
closed angle glaucoma,  
melanoma,



effect on & off phenomenon  
varying of effect

oo treatment - levodopa given along with MAOB inhibitors COMT inhibitors  
Dr agent

- MAO MAO-B Inhibitors :-

- rasagiline

- selegiline

inhibit neurodegeneration

uses -

start of parkinsonism disease treatment

COMT inhibitors :-

Entacapone, Tolcapone increases the bioavailability of levodopa.

dopamine agonist :-

• ergot alkaloids :-

→ Bromocriptine, pramipexole

• synthetic alkaloid

• ropinirole

They are neuroprotective starting parkinsonism disease treatment making long acting

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Vidyalekhan

DATE -  
PAGE - 3

◦◦ lesser dyskinesia,  
on & off phenomenon

drug of choice in restless drug  
syndrome

- Amantadine,

used in levodopa, dyskinesia.



Section C 'LAD's'

(1)

oral hypoglycemic drugs :-

Classification of oral hypoglycemic drug :-

(a) Sulfonyl ureas -

1<sup>st</sup> generation - Tolbutamide, Chlorpropamide, Acetohexamide

2<sup>nd</sup> generation - Glipizide, Glimepiride, Gliclazide, Glimepiride.

(b) Biguanides - phenformin, metformin

(c) Misc - Acarbose, Guargum.

(\*) Sulfonylureas :-

structurally resemble sulfonamide but lack antibacterial action.

They can act on specific receptors on beta cells of islets of Langerhans to cause depolarization →

Ca<sup>2+</sup> influx

↓  
degranulation

↓  
insulin release.



They are not effective in juvenile DM insulin release in response to food etc.

It is delayed which is restored by these drugs, & improve carbohydrate tolerance. on long term use they increase sensitivity of target tissue to insulin (extrapancreatic action; increase in insulin receptors) they are well absorbed orally & variably bound to plasma proteins & metabolised & excreted in urine

### Interactions :-

- (1) Enhanced action by displacement from proteins - phenylbutazone - by inhibition of metabolism - chloramphenicol
- (2) Enhanced action - enhanced metabolism - phenobarbitone,  
- opposite action - corticosteroid.

### Adverse effects :-

- (1) Hypoglycemia is treated with oral or IV glucose.
- (2) Nausea, Vomiting, headache, paraesthesia.
- (3) Hypersensitivity - rashes, transient leucopenia, agranulocytosis



preparation & doses:-

Tolbutamide  $t_{1/2}$  6-8 hrs.

Dose 0.5 - 3g. daily

chlorthalidone  $t_{1/2}$  30-60 hrs

Dose 0.1 - 0.5g

glybenclamide :-  $t_{1/2}$  - 12 hrs

Dose 5-20mg.

Gliclazide  $t_{1/2}$  - 12 hrs. Dose

40-240mg.

(3)

Antiepileptic Classification based on clinical use :-

(a) Drugs used in grand mal epilepsy.

Phenytoin, Carbamazepine, phenobarbitone, Valproate, Lamotrigine, gabapentin.

(b) Drugs used in petit mal epilepsy :-

Valproate, Ethosuccimide, Clonazepam, Lamotrigine.

(c) Drugs used in myoclonic seizures.

Valproate, clonazepam, lamotrigine

(d) Drugs used in Atonic seizures :-

Valproate, clonazepam.

(e) Drugs used in febrile seizures

Diazepam.

(\*) Carbamazepine :-

• Carbamazepine is a sodium channel blocker

MOA • it is a preferentially binds to voltage gated sodium channels in their inactive conformation, which prevents repetitive & sustained firing of



## action potential

- pharmacological actions of Carbamazepine resemble phenytoin but a number of important differences have been noted. Carbamazepine modifies maximal electroshock seizures as well as raises threshold to PTZ & electroshock convulsions. It also inhibits kindling.

recently found to have therapeutic effect in mood disorders.

it has antidiuretic action, probably by enhancing ADH action on renal tubules.

## • Adverse effects:-

- (1) Neurotoxicity (dose-related):  
sedation, dizziness, vertigo, diplopia, ataxia.
- (2) Vomiting, diarrhoea, worsening of seizures at higher doses.
- (3) Hypersensitivity reactions - rash, photosensitivity, hepatitis, rarely, granulocytosis & aplastic anaemia.
- (4) water & sodium retention & hypernatremia - due to enhancement of ADH like action.
- (5) increased incidence of minor foetal malformations if used during pregnancy.



Uses :-

- (1) most effective drug for complex partial seizures
- (2) shares first choice drug status with phenytoin for grand mal epilepsy & simple partial seizures.
- (3) Trigeminal & related seizures.  
neuralgia. - The disorder is manifested by attacks of severe pain even by trivial stimulation in the area of distribution of trigeminal nerve of the face. Its exact mechanism of action is not known, but may act by inhibiting voltage dependent Na<sup>+</sup> channel to prevent its intracellular accumulation during repetitive stimulation & promoting its efflux. It exerts selective action on high frequency nerve impulses with little effect on normal neuralgia. It is the drug of choice.
- (4) Manic depressive illness - as an alternative to lithium.



**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams -Microbiology**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets.</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	14	Yes
2017- 2018	05	Yes
2016- 2017	Nil	Nil

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**Consolidated report on retest exams -Forensic Medicine**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets.</b>
2020-2021	Nil	Nil
2019-2020	03	Yes
2018-2019	Nil	Nil
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil

  
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SEAT NO.				
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1	○	○	○	●
2	○	○	●	○
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7	○	○	○	○
8	○	○	○	○
9	○	○	○	○

QUESTION BOOKLET VERSION				
A	○	0	○	○
B	○	1	○	○
D	○	2	○	○
G	○	3	○	○
H	○	4	○	○
M	○	5	○	○
N	○	6	○	○
P	○	7	○	○
S	○	8	○	○
U	○	9	○	○

Answer Sheet No. \_\_\_\_\_  
(Write this no. on your question booklet)

SUBJECT :  
FMT

Paper : mcq

ROLL NO. (In words)  
Twenty one

QUESTION BOOKLET VERSION (In Words)

This is to certify that the entries of Seat No. Question Booklet, Version No. and Subject have been verified.

*Rishiya*                      *TRG*  
CANDIDATE'S SIGNATURE      INVIGILATOR'S SIGNATURE

Date : 10 / 12 / 2020

USE BLUE / BLACK BALL POINT PEN ONLY .....

- INSTRUCTIONS**
- DARKEN THE CIRCLE ● ONCE ONLY USING BALL POINT PEN.
  - DARKEN THE CIRCLE FOR EACH QUESTION AS SHOWN BELOW.
- |       |         |       |       |
|-------|---------|-------|-------|
| WRONG | CORRECT | WRONG | WRONG |
| a ⊙   | a ●     | a ●   | a ⊙   |
| b ○   | b ○     | b ○   | b ○   |
| c ○   | c ○     | c ●   | c ○   |
| d ○   | d ○     | d ○   | d ○   |
- NO MARKS WILL BE GIVEN TO WRONG ENTRIES.
  - NO MARKS WILL BE GIVEN IF THE ENTRY IS ERASED BY STRIKING OR USING WHITE INK.
  - DARKEN THE CIRCLE PROVIDED. DO NOT MAKE ANY STRAY MARKS ON THE ANSWER SHEET.
  - ROUGH WORK MUST NOT BE DONE ON THIS ANSWER SHEET.
  - USE FREE SPACE IN THE QUESTION BOOKLET PROVIDED.

Q. No.	1	2	3	4	5	6	7	8	9	10
a	○	○	○	○	○	○	○	○	○	○
b	○	○	○	○	●	○	○	○	●	●
c	○	●	○	●	○	●	●	●	○	○
d	●	○	●	○	○	○	○	○	○	○
Q. No.	11	12	13	14	15	16	17	18	19	20
a	●	●	○	○	○	○	○	○	○	○
b	○	○	○	○	○	○	○	○	○	○
c	○	○	○	○	○	○	○	○	○	○
d	○	○	○	○	○	○	○	○	○	○
Q. No.	21	22	23	24	25	26	27	28	29	30
a	○	○	○	○	○	○	○	○	○	○
b	○	○	○	○	○	○	○	○	○	○
c	○	○	○	○	○	○	○	○	○	○
d	○	○	○	○	○	○	○	○	○	○

$\frac{3.5}{6}$  *TRG*



Supervisor's Signature

MAEER'S  
MAHARASHTRA INSTITUTE OF MEDICAL EDUCATION & RESEARCH

## MEDICAL COLLEGE

DR. BHAUSAHEB SARDESAI TALEGAON RURAL HOSPITAL

TALEGAON DABHADE (PUNE - 410 507)

Accredited by NAAC with 'A' grade

### ANSWER - BOOK

Roll No. 21 M.B.B.S. II year Term I st term  
Examination \_\_\_\_\_ Subject FMT  
Paper \_\_\_\_\_ Section B & C Date 10 / 12 / 2020

Q. No.	Sub Question										TOTAL MARKS	
	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H	9/I	10/J		
1	3.5										3.5	
2	1	1.5	1.5								4	
3	3	3									6	
4												
5												
6												
7												
8												
9												
10												
Total Marks in Digits											14	13.5 = 14
Total Marks in Words											<del>Eleven</del> Fourteen	

Perusal date / / Sign of teacher (Assessor) [Signature]

Sign of student \_\_\_\_\_ Sign of H.O.D. [Signature]

20



## section C

1a]

1)

→ Late signs of death :-

- late signs of death appear after complete molecular death.

-

2) Decomposition / putrefaction :-

- body starts decomposing by the action of hydrolytic enzymes of the body, its own & by the bacteria present in intestine of body.

- enzymes start decaying the cells & tissue.

- requirements :

- abundant air

- moisture

- warmth

- these factors ↑ rate of decomposition.

3 • bacteria start decomposition the viscera, skin, fats, connective tissue.

- 1st the tissue becomes dark.

- then liquefactive process begins and becomes soft, liquefied and then last & skeleton is remained.

- various gases are produced in GIT that as result of hydrolytic enzymatic action of bacteria ( $\text{CO}_2$ ,  $\text{NH}_3$ ,  $\text{CO}$ ,  $\text{N}_2$ ) which

- produce foul odour

- pressure inside body ↑ due to continuous prod<sup>n</sup> of gases.

- due to gaseous pressure all other viscera become under high pressure and start decaying.

- postmortem delivery in pregnant women may occur.

- bloating of skin & viscera

- teeth & other organs can be punched out easily.

- process is started immediately after molecular death.

### b) Adipocere form<sup>n</sup> : [saponification]

- if the body dead is lying in water, damp areas or unventilated areas, the where the air is not present, and moisture is excess, body starts saponifying.
- this is due to in absence of air, fat in body start hydrolyzing and hydrogenation of fats to fatty acids, these combine with calcium/  $\text{NH}_4$  to form insoluble soaps.
- body appears yellowish, soft, waxy, fatty.
- fastened in fatty bodies, (greasy to touch)
- identification can be done as facial & injuries are preserve in case of death due to injury.
- once adipocere is formed, body decays very slowly, as adipocere reduces degradation by enzymatic actions.

### c) Mummification :

- when dead body is lying in environment of excess air but less or no moisture, it gets dried up and mummified.
  - excess air
  - no moisture
  - warmth
- the skin loses all moisture and starts decaying and muscles dry up and become adherent to underlying bones.
- viscera also lose moisture, blend together and form single mass.



Signature

- then whole body is mummified.
- identification of body is possible since, facial features & injuries are preserved.
- cause of death can be detected.

- in case of decomposition also, identification can be done & cause of death can be detected.

- ~~Buried bodies mummify faster as there is no moisture.~~

- buried bodies decompose & mummify at very slow rate.

- adipocere formation is faster in body removed from water.

\* Viscera in decomposition:

- prolapse of uterus & bladder may occur due to gas production.

- bloating and swelling of viscera.

- bloating & swelling of face, lips, skin.

- skin swells, edematous, darkens & decomposes.

- postmortem lividity may be seen.

- all tissues and organs darkens, start liquefying due to liquefaction by hydrolytic enzymes.

\* skin in decomposition:

- skin cooles due to stoppage of blood circulation and hypothermia.

- skin becomes bluish black due to stagnation of blood due to gravitational pool.

- finally starts eroding by hydrolytic enzymes.

2] → stages of recording of evidence in court..

1] summon :

summon is issued by magistrate of court about compelling attendance of witness in court on specified date & time, under penalty.

2] Oath administration :

3) - Oath is taken from witness on the name of god or religious books.

3] Recording of evidence :

a) chief examination :

- it is chief examination of witness in court by the lawyer of same party.
- leading questions are not allowed.
- it is to put forward all facts and what actually happened.
- witness explains all the facts about the scene happened.

b) cross-examination :

- it is examination of witness in the court by the lawyer of opposite party.
- here, leading questions are allowed.
- opposite lawyer asks the leading questions to the witness.
- this makes establishment of the real truth about case.
- important step as it acts as a 'double sword'.
- opposite lawyer tries to establish more truth and makes his party strong.



d) Re-examination :

- it is same as chief examination and examined by lawyer of same party.
- leading questions not allowed.
- it is to establish truth and clearing the doubts and statements correction by witness if he has stated false.

d) questions of court :

- the magistrate/ judge can ask any related questions during any stage of recording to the witness in case of any doubts produced.

4] Discharge and closure of case :

\* doctor in witness box :

- if a doctor is witness as doctor is involved in physical & overall examination, medicolegal reports, P.M. reports.

- procedure for recording the evidences in the court for doctor as witness is same.

1) chief examination

2) cross-examination

3) Re-examination

4) questions by court.

- if death is natural if results are not foul act done, witness and other persons discharged.
- if foul act is done, witness and other persons punished and punished by magistrate.
- if statements found false, case remains as open case for further investigations.

## Section B

17

→ Summons :- / Subpoena :-

- defined as the written document by the presiding officer in court about compelling the attendance of witness in court, under penalty, on specified date & time for a specified case.
- It is compulsory to the witness to attend the court unless there is any reasonable cause for absence if a summon is issued.
- For medical person, cause for absence may be due to his own illness or any other medical emergency.

• penalty :-

- if summon is not obeyed, penalty is issued.
- for civil case it is to lose the party.
- for criminal case — 1) fine upto 500/-  
2) imprisonment upto 6 months  
3) warrant may be issued.

• Money conduct :-

- it is issued for travelling & daily expenses to reach the court.
- it is always sanctioned by court for a medical doctor.
- For criminal case it may not be paid.
- For civil case - it may or may not be paid but witness can avail it.



\* preference :-

- If two summons are received from two different courts, the summon from court having higher status is preferred.

2)

→

1) somatic death :

- it is defined as death of tissue / organ / system of the body. after death immediately.
- it is clinical death.
- as the major organ & systems e.g. heart, brain, lungs stop their function, blood supply is cessed
- All aerobic reactions in body are stopped due to absence of oxygen as blood supply is stopped.
- but anaerobic rx<sup>n</sup> are still continuing hence there can be movement of muscles.
- hence muscular tissue still getting ATP.
- brain dead case.

1/2

- Immediate signs of somatic death :-

- stoppage of beating of heart & flat ECG
- stoppage of / death of brain system flat EEG.
- cessation of voluntary respiration. stoppage of lungs functions.
- pupillary movements can be present.

2) Molecular death :

- it is defined as complete cessation and death of all the cells of body.
- anaerobic processes also stop. due to depletion of ATP and no muscular movement is seen or any pupillary movement is seen.
- All cells are died.
- it occurs after 5-10 mins of somatic death.



## - immediate signs :

- cooling of body
- skin changes
- muscle changes
- pupils are completely dilated & fixed

## - late signs :

- decomposition
- adipocere formation
- mummification.

## \* Importance & significance :-

1. after somatic death, body can be disposed off (as per religious rituals) and handed over to relatives in natural death.
2. For organ removal for organ transplantation should be done immediately after somatic death but before molecular death.

## - Time duration :

- brain - within 5 mins, heart within 15 mins, liver within 45 mins, kidneys - 1 hr, skin - 3 - 6 hrs, bones - 3 - 6 hrs, cornea within 3 hrs.

## Male pelvis

1. ~~wide~~ narrow and deep
2. the pubo ischial ramus is everted
3. ischial spine + tuberosity is inverted.
4. subpubic angle is acute  $70-80^\circ$
5. distance bet<sup>n</sup> acetabulum + pubic symphysis is less than diameter of acetabulum.
6. acetabulum is deep + wide
7. sub auricular sulcus less prominent
8. two anterosuperior iliac spines are not widely separated.
9. Obturator foramen is oval
10. pubic symphyseal surface is large
11. greater sciatic notch is deep + narrow.

## Female pelvis

1. shallow, narrow
2. pubo inverted
3. everted
4. obtuse  $> 90-100^\circ$
5. more
6. narrow + shallow
7. more prominent (in multipara)
8. widely separated.
9. triangular
10. small
11. it is wider, shallower





**DEPARTMENT OF FORENSIC MEDICINE**  
**PRACTICAL EXAMINATION**

Semester  Third /  Fourth

Roll No 21

Date 10/12/2020

Ex.		Marks	
Ex.	examination of age in living	4	3
Ex.	medical certificate death	4	3
Ex.	sickness certificate	04	3
Ex.	examination & reporting of bone	03	3
Ex.	Viva	05	
Total		20	12

**Name & Signature of Examiners:**

1. Dr \_\_\_\_\_ 2. Dr \_\_\_\_\_  
3. Dr \_\_\_\_\_ 4. Dr \_\_\_\_\_

**Exercise 1]**

→

Estimation of age in living :-

Examination to opine about age

→

To,

The Investigating Officer,

Shri Sanjay A. Shirke

P.S.

Talegaon (D)

requisition letter NO 345/18

dated : 10/12/2020

P.C : Mr. D.B. Salunke,

B.No : 211

P.S. Talegaon (D)

Name : Ashok Shankar Patil

residential address : Adamtara, P.S - Balrampur,  
Uttar Pradesh,

age : 16 yrs.

1]. Physical Examination :-

1) Height : 154 cms      2) weight - 48 kg

3) chest girth at level of nipple - 26 cms

4) abdominal girth at level of naval - 24 cms

5) primary & secondary appearance - averagely built & nourished

6) All permanent teeth erupted, except right upper 3<sup>rd</sup> molar.

7) X ray findings

1) elbow joint - fused (fuses about 17-18 yrs)

2) wrist - fused (fuses about 18-19 yrs)

- all carpal bones appeared (after 17 yrs)

- base of 1<sup>st</sup> metacarpal fused (after 17 yrs)

3) shoulder jt - fused.





**MEDICAL COLLEGE**

DR. BHAUSAHEB SARDESAI TALEGAON RURAL HOSPITAL  
TALEGAON DABHADE (PUNE - 410 507)

FCS  
Supervisor's Signature

Q2]

→

Medical certificate of cause of death

(to be sent to registrar of birth & death)

I Dr. ABC <sup>BSTRH, Talegaon (D)</sup> Form 4  
hererby certify that the deceased was admitted  
to hospital 15 days back i.e. from 25/11/2020  
to 10/12/2020 and he/she died in hospital  
on 10/12/2020 at 9 am.

name of deceased : Mr. PQR

address of residence : Flat 5, suryKunj apt, andnagar,  
Talegaon (D).

age	sex	date of birth	marital status	occup <sup>n</sup>	religion	age			
						if under 1 year		if under 24 hrs	
						months	days	hrs	mins
70	M	not known	not known	-	-	-	-	-	-

3)  Natural : suicide / homicide / accident

• cause of death :

a) immediate cause :  
(injury, disease that precedes the death)

intracerebral

haemorrhage +

hypostatic pneumonia

time interval of onset & death

— 18 days

— 4 days

b) antecedent cause :  
(any underlying disease that contributing to cause of death)

- cerebral metastasis  
of squamous cell  
carcinoma of lung

- 2 yrs

c) any other disease :

- chronic Diabetes mellitus

- 10 yrs

If Deceased was a female :- Yes / No ✓  
1. Was the death associated with pregnancy? Yes / No ✓  
2. Was this delivery? Yes / No ✓

✓  
Allopathy / Ayurvedic / Homeopathic / Unani

Name of deceased: Mr PQR  
Address: Flat 5, Suryakunj Apt, Anandnagar,  
Talegaon (D).

No Dr. XYZ  
Hospital No: 129/2020 signature  
Date: 10/12/2020 (Authorised medical  
practitioner) RMP  
seal & registration No  
12345

FMT  
MIMER  
BSTRH  
Talegaon (D)

(To be detached and handed over to the relatives  
of deceased)

This is certified that Mr. PQR was admitted  
to hospital BSTRH Talegaon (D) on 25/11/2020  
to 10/12/2020 and died on 10/12/2020  
at 9 am.

Dr. XYZ  
Hospital No: 129/2020 signature (RMP)  
Date: 10/12/2020 seal & Regd. No -  
12345

FMT, MIMER,  
BSRTH  
Talegaon (D)



Q 3]

→ Medical sickness certificate

Signature of applicant : ABC (government servant/private)  
residential address of applicant : Flat 12, Kaveri  
Apt, Anandnagar, Talegaon (D).

I Dr. XYZ after complete, personal examination of Mr. Gajanan Hari Koli who signed above age, 33 yrs certify that he/she is suffering from Acute pharyngitis and needs the period of rest of 5 days. For

The period of rest for 5 days is important/needed for recovery of his/her health

3 I have advised him/her to take rest from 10/12/2020 for 5 days and needs permission for absence of from duty from 10/12/2020 for 5 days.

Hospital Redg : No : 129/2020

Date : 10/12/2020

Dr. XYZ

Signature

(authorised medical attendant)

sedl + Redg No - 12345

FMT  
MIMER  
Talegaon (D)

## 34] Examination report of bone :-

TO,

The investigating officer, P.S : Talegaon (D)

Reference letter No : 456/18 dated : 10/12/2020

P.I : Mahadev Aher P.S - Talegaon (D)

The sealed packed of mandible was brought by

PC No : 2804 , Tukaram Patil , P.S Talegaon (D)

### Examination of bone :

1. Bone or not : It is bone as identified by its morphology, anatomy, microscopy.
2. Human or not : Human as identified by gross anatomy, morphology and microscopy and precipitation test positive.
3. Name of bone : mandible
4. Age of bone : more than 17 yrs as the 3rd molar have erupted.  
( 3rd molar = 17 - 25 yrs)
5. Sex of bone : Male as identified by anatomy.  
- angle of mandible is everted, rough surface and prominent muscular attachments.
6. Cause of death : cannot be determined as no injury or fractures are seen on bone.
7. Time since death : more than one year as no soft tissue present or no foul smell



8. stature : can not be determined

9. Race : can not be determined

10. Identification :

specific opinion can not be given but given bone i.e. mandible belongs to male above 17 yrs of age , time since death is more than 1 year.

specific identification can be done by HLA typing and DNA fingerprinting.

herewith bone to be sent to FSL for the same.

11. ~~manner of sp~~

place : MIMER medical college,  
Talegaon (P).

XYZ  
signature of RMO  
( Dr. XYZ)

Date : 10/12/2020

Seal & Redg No - 12345



1) → Age Estimation

To,

The Investigating officer Shri. Sanjay A. Shirke

Reference - 345/18

Name - Mr. Ashok Shankar Patil

Age stated - 16 years sex - male occupation

Address - Adamtara, Dist - Balrampur, Uttar Pradesh

Brought by police constable Mr. DB Sankhe No. 211 P.S. Talgaon  
Dakshade

Identified by: Police Constable

Date & time of examination - Today 10th Dec. 2020 at 12:30 pm

Place of examination - Casualty department MIMER MC Talgaon  
D.

Consent - Are you willing to undergo examination for age determination by medical college which include physical examination, genital, dental & radiological.

Ans - Yes / No (if minor < 12 yrs, consent of parents/guardian)

AS P  
Signature

Examined in presence of \_\_\_\_\_  
(If female)

Signature female attendant

Identification marks - 1) Green colored tattoo mark of leaf seen  
over front aspect of left forearm 3cm below  
elbow joint.

2) mole on tip of nose

Birth date - not known

Education - not known

Physical examination

1) Height - 154 cm

2) weight - 60 kg

3) chest girth at level of nipple - 29 cm 4) Abdominal <sup>girth</sup> at level  
of navel - 27 cm

5) General build & appearance - Average built & nourished



6) Hairs : Pubic : <sup>Tanners</sup> Stage 5 Axillary : appeared facial : appeared Scalp - present

7) Development of breasts - Normal

8) Development of genitals - Tanners Stage 5

9) Onset of Puberty

Voice - Hoarseness of voice. Adam's apple - well developed

Date of menarche - NA Regularity of menses - NA

10) Dental Status

3M	2M	M	2PM	PM	CA	LJ	CI	CI	LJ	CA	PM	2PM	M	2M	3M
X	17	16	15	14	13	12	11	21	22	23	24	25	26	27	X
X	47	46	45	44	43	42	41	31	32	33	34	35	36	37	X

1) Any other findings

Skin - Normal

Eye - Normal

Other - Nil

2) Advised X-ray : 1) Right Elbow jt - AP view 2) Right shoulder

3) Right wrist jt 4) Pelvis

X-ray plate no - 20/2020

Date - 10th Dec 2020

## Provisional Age certificate

On clinical examination of individual, age is about >14 yrs less than 20 years. However, the final opinion regarding age should be collected from this office after submission of radiological report & birth certificate.

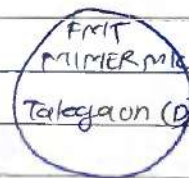
ABC

Signature

Name Dr. ABC

Designation - CMO

Reg no - 12434



Place - MIMER MIA, Telagaon (D)

Date - 10/12/2020

## X-ray findings

- Elbow jt - fused - fuses at 15-17 yrs.
- Wrist jt fused - lower end of radius - fuses at 18-19 yrs  
 lower end of ulna - "17-18 yrs  
 base of 3<sup>rd</sup> metacarpel - "15-17 yrs
- Shoulder jt - fuses at 18-19
- Pubic PBH - iliac crest appeared but not fused  
 → 20-21 yrs  
 cartilage fuse → 15 yrs  
 upper end of femur fused with shaft



1

Age certificate

To

The I.O Shri Sanjay A. ShirkeReference: Age estimation of Mr. Ashok Shankar Patil dated 10th Dec 20

Sir,

I, Dr. ABC,after going through findings of SHH # Mr. Ashok Shankar PatilPhysical examination report no. 120/2020 dated10th Dec 2020 X-ray plate no 120/2020 dated 10/12/20Radiological examination report no. 20/2020 dated 10/12/20of the date of birth certificate no. NA dated 10/12/20  
not available

Produced before me,

I am of the opinion that the individual's  
age is about 19 ± 1 years.ABC  
Signature

(Dr. ABC

Designation - CMO

Reg no. 12345)

Place - MUMBAI MC Talegaon (D)Date - 10th Dec 2020

2) Death.

I do hereby certify that persons whose particulars given below died in hospital in \_\_\_\_\_

Name of deceased - Mr. PQR for use by \_\_\_\_\_  
 Address of normal residence - Flat 5, Suryakunj Apt. Anandnagar Telangana Statistical office \_\_\_\_\_

Sex	Age in Yrs.	Date of birth	Marital status S M W/D	Occupation	Religion	Age at birth	
						If under 1yr month/day	If under 24hrs Hrs. min
M	75		M	Not known	not known		

cause of death

Interval between onset & death approx.

## I. Immediate Cause:

Disease, Injury or Complication

which caused death, not mode of

dying such as heart failure, asthma etc.

Antecedent Cause -

morbid condition, if any, giving rise to

above cause, stating underlying

condition last.

a) fracture neck of femur

due to: (or as consequence of)

b) deep vein thrombosis

c) fracture neck of

## II. Other Significant Conditions

Contributing to death, but not

related to disease or condition causing it

— Ischaemic heart

disease

Accident / suicide / Homicide (specify): How did injury occur?

If deceased was female

was death associated with pregnancy? Yes/No ✓

was there delivery? Yes/No ✓

Name or rubber-stamp of Institution: Serial number \_\_\_\_\_ Date of report \_\_\_\_\_

MIMER medical college & P.

of inst -

12/20

BS TR hospital

23/02



Allopathic / Ayurvedic / Homeopathic / Unani

Date & time - 10/12/20 at  
12:30 pm

Signature & address  
of

(Dr. - ABC

Designation & seal -  
Reg. - 12345



(To be detached & handed over to relative  
of deceased)

Certified that Shri/ ~~smt~~ / Kum PQR

S/W/D of Shri XYZ Resident of Suryakunj Ap.  
Brandnagar Telagaon was admitted to hospital <sup>Telagaon (D)</sup>  
expired on 10/12/2020 at 12:30 pm am/pm

Date & time - 10/12/2020  
at 12:30 pm

ABC  
Signature & address of

(Dr. ABC

Designation & seal <sup>cmio.</sup>  
Reg - 12345



## 3) Sickness

Signature of the applicant Mr. Gajanan Hari Koli  
(Government servant / private)

I Dr. ABC after careful  
personal examination of case hereby certify that Mr. Gajanan  
Hari Koli whose signature is given above is  
suffering from Dengue fever ~~fever, chills~~ is under  
my treatment for the same as outdoor / indoor patient.  
(And I consider that period of absence from duty  
of 10 days with effect from Today, 10/12/20  
is absolutely necessary for restoration of his/her  
health ~~he/she~~ is advised rest for a  
period of 10 days.

Identification marks - 1) J black mole of pinhead size  
on top of nose

2) White sore mark over anterior  
surface of left forearm

Hospital No. 123/2020

Date - 10/12/20

Dr. ABC

Signature of

Medical Attendant

Seal & Reg No. - 12345





4)

To

The Investigating officer Mahadev AherRef - your letter no - 456/18 dated 10/12/20

Sir,

I have the honour to report to you about the bone referred.

Observation -

- 1) Bone or not - yes, bone by gross & microscopic ex.
- 2) Human or not - yes, by gross anatomy, +ve precipitin test
- 3) Name of bone - pelvis
- 4) Individual / more - one
- 5) Age - > more than 25 as iliac crest fused with rest of bone which fuses at 21-24 yrs, ischial tuberosity fused, Sacrum become single bone.
- 6) Sex - female as inlet circular, shape of obturator foramen - triangular, greater sciatic nerve notch - wide, subpubic angle - obtuse.
- 7) Stature - can't determined
- 8) Race - can't determined
- 9) Cause of death - can't determine, d/t absence of fracture
- 10) Time since death - > 1 yr as bone is dry, no foul smell (soft tissue attached)
- 11) Manner of separation - natural

Q 12) Identification -

No definite opinion can be given, but bone may belong to female more than 25 yr

Specific identification can be obtained by DNA Profiling, blood test analysis & blood grouping sent to FSL

Place of examination - MIMER MIC Forensic (P)

Date of ex - 10/12/20

APC

Signature of

Dr. APC

Designation - CMO

Ref - R345





5.

VIVA

1) Injury under sec 44 IPC

Injury is defined as any harm caused illegally to a person i.e. to his body, mind, reputation or property.

2) Lynching -

It is homicidal hanging. In this type, suspected person / criminal guilty of crime is hanged by crowd. Mob of people catch the offender & hang it forcibly to tree / lamppost.

3) Indications -

- 1) Therapeutic
- 2) Eugenic
- 3) Humanitarian
- 4) Social

4) Mc Naughten's rule

"To establish defense on ground of insanity, it must be clearly proved that at time of committing act the party accused was labouring under such a defect of reason from disease of the mind, as not to know the nature & quality of act he was doing or if he did know it that he didn't know he was doing what was wrong."

5) +ve Diatom test

1) Diatoms - Ubiquitous & present in soil, water  
lab app. Contamination may occur giving  
false +ve test

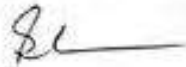
2) Diatoms can be demonstrated even in  
non-drowning death.



**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams -Pathology**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets</b>
2020-2021	Nil	Nil
2019-2020	17	Yes
2018-2019	02	Yes
2017- 2018	03	Yes
2016- 2017	Nil	Nil



PROFESSOR AND MOD PATHOLOGIST  
MIMER'S MEDICAL COLLEGE  
TALEGAON DASHADE-410 607





## Section - B: BACB

Following are the criterias for blood donor selection of blood donor:

- (i) The donor shall be in the age group of 18 to 60 yrs.
- (ii) The donor should be above 45 kilograms.
- (iii) Haemoglobin which shall not less than 12.5gms.
- (iv) The systolic and diastolic blood pressures should be normal limits.
- (v) Donor shall be free from any diseases transmitted by blood transfusion.
- (vi) Temperature and pulse should be normal.
- (vii) The donor shall be free from any diseases at the side of phlebotomy.
- (viii) The arms and forearms of the donor shall be free from skin ailments of scars indicative of professional blood donors or addiction of self injured narcotics.

Q. 2.

3.)

(i) Atrophy: A reduction of number and size of parenchymal cells of an organ or its parts which was once normal is called atrophy.

example: Hypothyroidism may lead to atrophy of thyroid, adrenal and gonads.

(ii) Hypertrophy:-

Hypertrophy is an increase in size of parenchymal cells resulting in enlargement of affected organ or tissue.

example: Hypertrophy of skeletal muscle in athletes.

pyloric stenosis.

(iii) Hyperplasia:-

Hyperplasia is an increase in the number of parenchymal cells resulting in enlargement of organ or tissue.

example: Labile cells (epithelial cells of skin and mucous membrane) can undergo hyperplasia.



#### (iv) Metaplasia:

metaplasia is defined as a reversible change of one type of mature differentiated epithelial or mesenchymal cells to another type of mature epithelial or mesenchymal cells, usually in response to abnormal stimuli, and transformed cells are able to withstand adverse effect of irritants better.

Example: In cartilage of larynx and bronchi in elderly people.

#### 4) Exfoliative cytology:

- (i) The method is based on microscopic identification of the characteristics of malignant cells which are non-adhesive and loose and are thus shed or exfoliated in the lumen.
- (ii) Exfoliative cytology initially employed for detecting dysplasia, carcinoma in situ and invasive carcinoma of the uterine cervix.
- (iii) Nowadays ~~the~~ ~~by~~ exfoliative cytology is also used for sputum examination, examination of pleural and peritoneal methods, examination of urine, gastric secretion, etc.
- (iv) There are two types of exfoliative cytology (i) gynaecological (ii) Non gynaecological exfoliative cytology.



5) Following are the clinical features of chronic myeloid leukemia:

- (i) chronic myeloid leukemia comprises about 20% of all leukemias and its peak incidence is seen in 3<sup>rd</sup> and 4<sup>th</sup> decades of life.
- (ii) Both sexes are affected equally.
- (iii) Features of anaemia such as weakness, pallor, dyspnoea and tachycardia.
- (iv) Symptoms due to hypermetabolism such as weight loss, lassitude, anorexia, night sweats.
- (v) Splenomegaly is almost always present and is frequently massive. In some patients, it may be associated with acute pain due to splenic infarction.
- (vi) Bleeding tendencies such as easy bruising, epistaxis, menorrhagia and haematomas may occur.
- (vii) Less common symptoms are gout, visual disturbances and neurological manifestations and polycythaemia.
- (viii) Juvenile CML is more often associated with lymph node enlargement than splenomegaly.

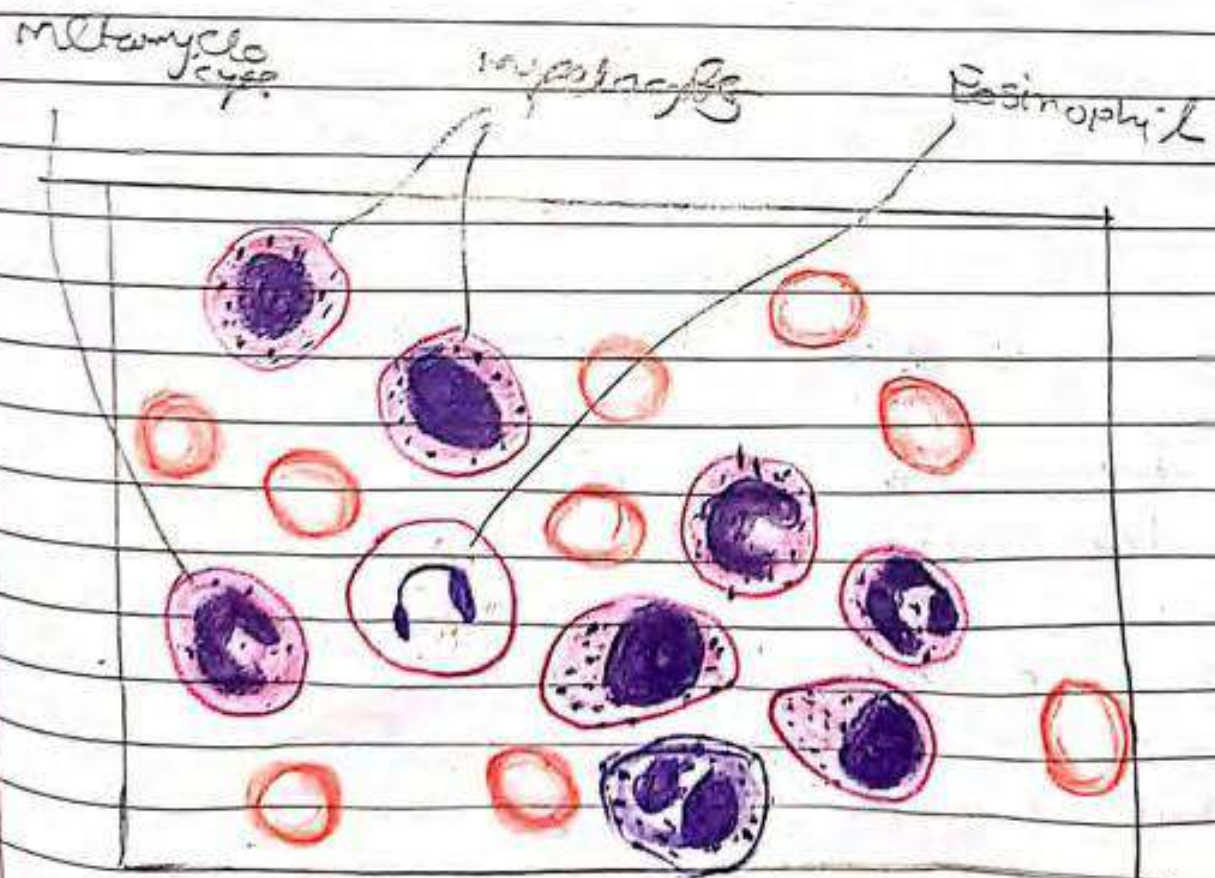


Following are the peripheral blood findings in case of CML:

1) ~~Red~~ Anaemia: Anaemia is usually moderate degree and is normocytic normochromic in type.

2) White blood cells: characteristically there is marked leucocytosis (approximately 20000/cu mm or more).

3) Platelet count may be normal but raised in about half the cases.



PBS in chronic myeloid leukaemia.



## 6) Fracture Healing.

Following is process of healing simple fracture healing:

### (I) Procallus formation:

(i) Haematoma forms due to bleeding from torn blood vessels, filling the area surrounding the fracture. loose meshwork is formed by blood and fibrin clot which acts as frame work for subsequent granulation tissue formation.

(ii) Local inflammatory response occur at the site of injury with exudation of fibrin, polymorphs and macrophages. The macrophages clear away the fibrin, red blood cells, inflammatory exudate and debris. Fragments of resorbed bone are scavenged by macrophages and osteoclasts.

(iii) Ingrowth of granulation tissue: begin with neovascularisation and proliferation of mesenchymal cells from periosteum and endosteum. A soft tissue callus is formed joining the ends of fracture bone without much strength.



(i) callus composed of woven bone and cartilage starts with first few days. The cells of inner layers of the periosteum have osteogenic potential and lay down collagen as well as osteoid matrix in granulation tissue. The woven bone undergoes calcification and is called woven bone callus. At times callus is composed of woven bone and cartilage temporarily immobilising the bone ends.

(ii) osseous callus formation: The procallus acts as scaffolding on which osseous callus composed of lamellar bone is formed. The woven bone is cleared away by incoming osteoclasts and the calcified disintegrates. In their place newly formed blood vessels and osteoclasts invade, laying down osteoid which is calcified and lamellar bone is formed by developing Haversian system concentrically around blood vessels.

### III Re-modelling:

During the formation of lamellar bone, osteoblastic laying and osteoclastic removal are taking place ~~and~~ place remodelling the united bone ends, which after sometime is indistinguishable from normal bone. The external callus is cleared away, compact bone is formed in place of intermedullary callus and bone marrow cavity develops in internal callus.



## Section C: LAQ's

Defination :- A Neoplasm or tumour is defined as a mass of tissue formed as a result of abnormal excessive uncoordinated, autonomous and purposeless proliferation of cells, even after removal of growth stimulus which causes it.

Following is the laboratory diagnosis of neoplasia:

### (I) Histological methods:

(i) These methods are the most valuable in arriving at the accurate diagnosis and are based on microscope examination of excised tumour mass or open/freezing biopsy from mass, supported with complete clinical and data of their relevant clinical investigations. The tissue must be fixed in 10% formalin for light microscopic examination and in glutaraldehyde for electron microscopic studies, while quick ~~free~~ frozen section and enzyme studies are carried out on unfixed tissues. These methods are as under:

(i) Paraffin embedding technique: In this, 10% formalin fixed tissue is used. Tumor mass or biopsy is processed through a tissue processor having an overnight cycle.



Embedded in molten paraffin wax for making tissue blocks. These blocks are trimmed followed by fine sectioning in 3-4um section using rotary microtome for which either fixed knife or disposable blades are used for cutting, the sections are then stained with hematoxylin and eosin and examined microscopically.

(ii) Frozen section: In this technique, unfixed tissue is used and the procedure is generally carried out when the patient is undergoing surgery and is still under anaesthesia. Here, instead of overnight tissue processing cycle and paraffin-embedding, an fast machine is used and fresh unfixed tissue is submitted, the tissue biopsy is quickly frozen to ice at about  $-25^{\circ}\text{C}$  that acts as embedding medium and then sectioned. sections are then ready for Hand E staining.

II) Cytological methods:

These are of two types (i) Exfoliative cytology (ii) Fine needle aspiration cytology

(i) Exfoliative cytology: This method is based on microscopic identification of the characteristics of malignant cells which are non-adhesive and loose and are



these shed off or exfoliated into the lumen.

(ii) Fine needle aspiration cytology:-

This method consists of study of cells obtained by fine needle introduced under vacuum into lesion, so called fine needle aspiration cytology. The superficial masses such as can be aspirated under direct vision while deep seated masses such as intra-abdominal, pelvic organs and retroperitoneum are frequently investigated by ultrasound or computed tomography (CT) - guided fine needle aspiration.

(iii) Histochemistry and cytometry:

Histochemistry and cytometry are additional diagnostic tools which help the pathologist in identifying the chemical composition of cells, their constituents and their products by special staining methods.

(iv) Immunohistochemistry (IHC)

IHC is an immunological method of recognizing cell by one or more of its specific components combine with specific antibodies on the formalin fixed paraffin section or cytological smears. The complex of antigen-antibody on slide is made visible for light microscopic identification by either



Fluorescent dyes or by enzyme system.  
The specific antibody against particulate antigen is obtained by hybridoma technique.

### (5) Electron microscopy

A few general electron microscopy may be helpful in confirming or substantiating tumour diagnosis arrived at by light microscope and immunohistochemistry.

⊕

### (VI) Serum tumour markers

Tumour markers are the substances which are secreted by tumour cells. These are ~~some~~ some of these tumour markers are (i) Alpha-fetoprotein (AFP), (ii) carcinoma-embryonic antigens, Hormones like hCG, calcitonin.



2) → Laboratory findings:

(i) Haemoglobin :- 7.9 gm/dl

(ii) MCV - 150 fl



Clinical features:

(i) fatigue (ii) weakness

(ii) tingling numbness in feet.

Clinical diagnosis - The patient is suffering from megaloblastic anaemia. The ~~person~~ B<sub>12</sub> deficiency in strictly vegetarian person may lead to megaloblastic anaemia. MCV of patient is above 120 fl.

(1) Blood picture and red cell indices:

(i) Haemoglobin - Haemoglobin estimation reveals values below normal range.

(ii) Red cells: Red blood cells. Red blood cells morphology in blood film shows the characteristic macrocytosis. The blood smear demonstrates marked anisocytosis, poikilocytosis and presence of macroovalocytes.

(iii) Reticulocyte count: It is generally low to normal.

(iv) MCV elevated above 100 fl.

(v) Platelet count may be moderately reduced.

(vi) Leucocytes count may be reduced.

## (2) Bone marrow findings:

(i) Marrow cellularity: Hypocellular with decreased myeloid-erythroid ratios

(ii) Erythropoiesis: - Erythroid hyperplasia due to characteristic megaloblastic erythropoiesis.

(iii) Other cells: Granulocyte precursors are also affected to some extent.

(iv) Marrow iron: Prussian blue staining of iron in the marrow shows an increase in number and size of iron granules.



## Special test:

- (i) ~~Test~~ Serum vit B<sub>12</sub> assay
- (ii) Schilling test
- (iii) Test for folate deficiency,

## Section A

Q1

d

1) D

B

15) C

2) A

3) B

16) C

4) B

5) A

6) B

7) A

8) A

9) D

10) D

11) C

12) D

13) B

14) A



## Section 3 -

Q.2.

(1) Gross morphology of peptic ulcers of peptic ulcers.

(i) Typical peptic ulcers are commonly solitary, small (1-2.5 cm in diameter), rounded to oval, and characteristically 'punched out'.

(ii) Benign ulcers usually have flat margins in level with surrounding mucosa.

(iii) The mucosal folds converge towards the ulcer. The ulcer may depth from being superficial to deep ulcer.

Microscopic features of peptic ulcer:

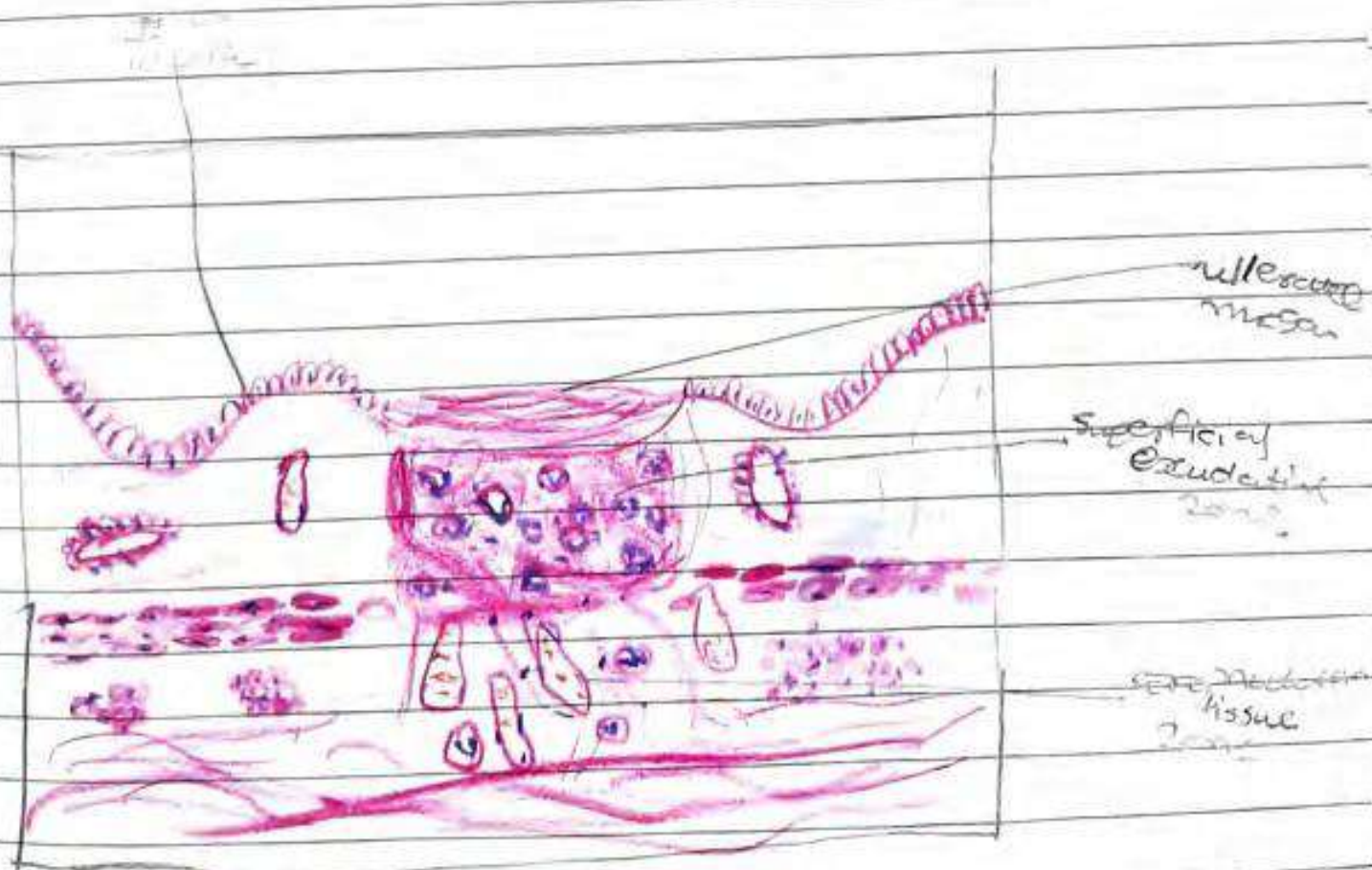
Chronic peptic ulcers have 4 histological zones:

(i) Necrotic zone - lies in the floor of the ulcer composed of fibrinous exudate and necrotic debris and a few leucocytes.

(ii) Superficial exudative zone - lies underneath necrotic zone. The tissue elements here show coagulative necrosis giving eosinophilic smudgy appearance with necrotic debris.

(iii) Zone of cicatrization  
(iv) Granulomatous tissue zone - is seen merging into thick layers of granulation tissue. It is composed of dense fibrocollagenic

scar tissue over which granulation tissue rests.  
Thrombosed or sclerotic arteries may cross  
the ulcer which on erosion may results in  
haemorrhage.



peptic ulcer



(2)

Clinical diagnosis: The patient is suffering with chronic alcoholic with hepatic encephalopathy is suffering from alcoholic liver disease (alcoholic cirrhosis).

Pathology of liver in alcoholic cirrhosis.

Grossly:

(i) Formation of numerous nodules of size less than 3mm in diameter.

(ii) Liver shrink to less than 1kg in weight, becomes non-fatty, having macronodular cirrhosis.

(iii) on cut section spheroidal or angular nodules of fibrous septa are seen.

Microscopically:

It includes following:

(1) Nodules pattern: Normal lobular architecture is effaced in which central veins are hard to find and replaced with nodal formation.

(ii) Fibrous septa - It is initially delicate and extend from central vein to portal triad

(iii) Hepatic parenchyma: - It shows proliferative regenerative nodules

(iv) Necrosis: Fibrous septa is usually infiltrate with mononuclear cells.



(3)

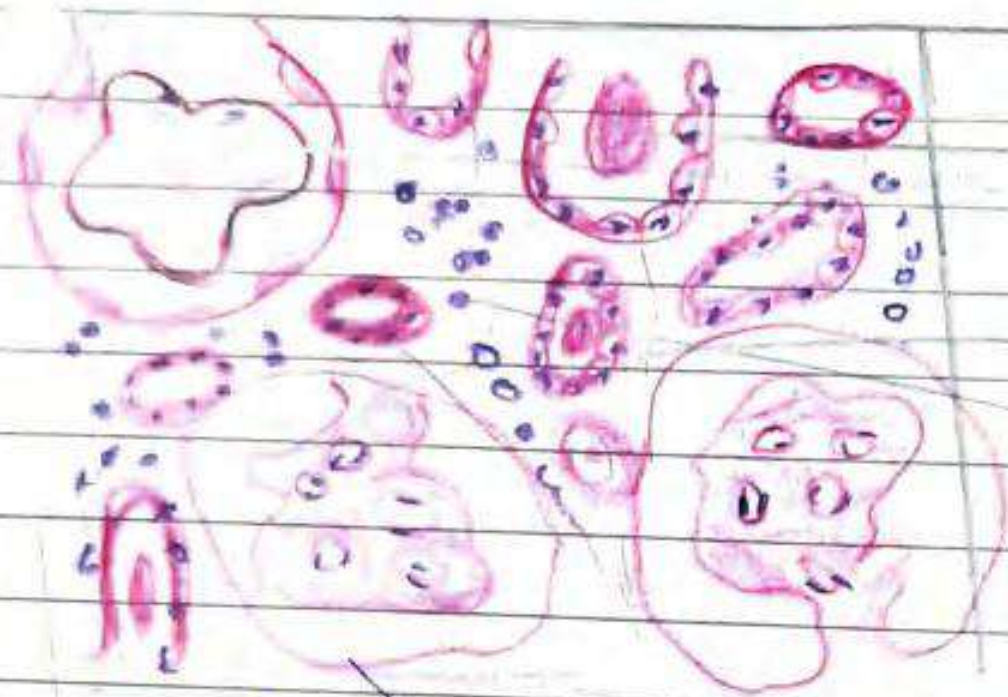
### Features of chronic pyelonephritis:

- (i) Kidneys show rather characteristic appearance. Kidneys are usually small and contracted showing unequal reduction. (ii) The surface of the kidney is irregularly scarred. (iii) The scars are variable in size and show characteristic U-shaped depressions on the cortical surface. (iv) Blunting and dilatation of calyces and dilated pelvis of kidney.

### Microscopic features of chronic pyelonephritis:

- (i) Interstitial: There is chronic interstitial inflammatory reaction, chiefly composed of lymphocytes, plasma cells and macrophages with pronounced interstitial fibrosis. (ii) Tubules: Tubules show varying degree of atrophy and dilatation. Dilated tubules may contain eosinophilic colloid casts and hyaline casts. (iii) Pelvicocalyceal system: The renal pelvis and calyces are dilated, may show inflammatory fibrosis.

(iv) Glomeruli: ~~the~~ These glomerular tufts in scarred area usually intact, there is often periglomerular fibrosis.



• colloid cyst  
• Hyaline cast glomeruli  
Fibrosis  
chronic inflammatory cell

Fig -

Chronic pyelonephritis.



Following is classification of testicular tumour:

I. Germ cell tumours derived from germ cell neoplasia in situ:

- (i) germ cell neoplasia in situ
- (ii) Specific forms of intratubular germ cell neoplasia:

(iii) Seminoma

(iv) Non-Seminomatous germ cell tumours

(v) Mixed germ cell tumours

II. Germ cell tumours unrelated to germ cell neoplasia in situ

(i) Spermatoocytic tumours

(ii) Teratomas

(iii) Yolk sac tumours

III. Secondary stromal tumours

(i) Leydig cell tumour

(ii) Sertoli cell tumour

Gross features of seminoma are following:

- (i) ~~It is~~ Involved testis enlarge up to 10 times its normal size but tends to maintain its normal contour since tumour merely invades tunica.
- (ii) The larger tumour replaces entire testis, whereas smaller tumour appears as circumscribed mass in the testis.
- (iii) cut section of the affected testis shows homogenous greywhite lobulated appearance.

Following are the microscopic features of seminoma.

(1) Tumour cells: The seminoma cells generally lie in cords sheets or columns forming lobules. Typically, in classic seminoma the tumour cells are fairly uniform in size with clear cytoplasm and well defined cell borders. The cytoplasm contains variable amount of glycogen that stains positively with PAS reaction. The nuclei are centrally located, large, hyperchromatic, syncytiotrophic. Blastocysts are occasionally present.

(2) Stroma: The stroma is delicate fibrous tissue which divides the tumour into lobules. The stroma shows characteristic lymphatic infiltration.



(6)

The diagnosis - Patient is having  
Fibroadenoma.

Following are the gross features of  
Fibroadenoma:

(i) Typical Fibroadenoma is a small, solid,  
well-encapsulated spherical or discoid  
mass. The cut surface is firm, grey-white,  
slightly irregular and may show slit like  
spaces formed by compressed  
ducts. Occasionally, multiple fibroadenomas  
may form part of fibrocystic disease  
and is termed fibroadenomatosis.

Following are the microscopic features of  
fibroadenoma.

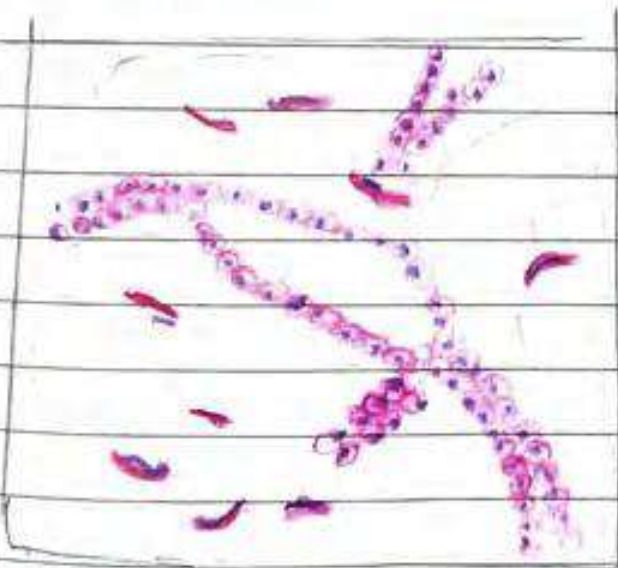
There are two types of pattern.

(1) Intra acinar pattern is one in  
which the stroma compresses the ducts  
so that they are reduced to slit-  
like cleft like by ductal epithelium

or may appear as cords of epithelial elements surrounding masses of fibrous stroma.

(2) Pericanalicular pattern is characterised by encircling masses of fibrous stroma around the patent or dilated ducts.

The fibrous stroma may be quite cellular and they may have ~~the~~ areas of hyalinised collagen.



Fibroadenoma - Intracanalicular pattern



## Section C: LAQ's

(3) The following is the classification of ovarian tumours.

(I) Surface epithelial-stromal tumours

A) Serous tumours

(i) Benign

(ii) Borderline tumours

(iii) Malignant

(B) Mucinous tumours

(i) Benign

2. Borderline tumours

(3) Malignant.

(C) Clear cell tumours

a)

~~(b) clear cell tumours~~

(D) Endometrioid tumours

(E) Transitional cell tumours

(F) Epithelial stromal tumours,

(1) Adenosarcoma

(2) Carcinosarcoma

## II. Sex cord - stromal tumours

### I. Granulosa cell tumours

(1) Fibromas

(2) Fibrothecomas

(3) Thecomas

(4) Leydig cell tumours

(5) Steroid cell tumours.

## III. Germ cell tumours.

(A) Primitive germ cell tumours

(B) Biphasic or triphasic tumours teratomas

(C) Monodermal teratoma or sarcoma type tumours.

(IV) Germ cell sex cord stromal tumours:  
Gonadoblastoma

(V) Krukenberg's tumours.



## (I) Dysgerminoma:

Grossly: Dysgerminoma is a solid mass of variable size. cut section of the tumour is grey white to pink, lobulated, soft and fleshy with foci of haemorrhages and necrosis.

Microscopically: this structure is similar to that of seminoma of testis. The tumour cells are uniform in appearance and large with vesicular nuclei and clear cytoplasm rich in glycogen. The fibrous stroma generally contains lymphocytic infiltrate and sometimes may have sarcoid granulomas.

## II Krukenberg Tumour:

Grossly: Krukenberg tumour forms moderately large, rounded or kidney shaped, firm multinodular masses in both ovaries. cut section shows grey white to yellow, firm, fleshy tumour and may have areas of haemorrhage and necrosis.

Microscopically: It is characterised by the presence of mucin-filled signet

ring cells which may lie singly or in clusters. It is accompanied by cellular proliferation of ovarian stroma in a storiform pattern.



Q2

(1) Diagnosis: The patient is suffering from acute pyogenic meningitis as vomiting and neck stiffness present.

laboratory diagnosis:

Diagnosis is confirmed by examination of CSF.

- (1) Naked eye appearance of cloudy or frankly purulent CSF
- (2) Elevated CSF pressure (above 180 mm water)
- (3) Polymorphonuclear neutrophilic leucocytosis in CSF (bet<sup>n</sup> 10-10000/mm<sup>3</sup>)
- (4) Raised CSF protein level (higher than 50 mg/dl)
- (5) Decrease CSF sugar concentration (lower than 40 mg/dl)
- (6) Bacteriologic examination by Gram's stain or by CSF culture reveals organism.

(7) Gram staining may show:

- E. coli
- H. influenzae
- S. pneumoniae
- Neisseria meningitidis

(III) CT Scan of brain may reveal inflamed  
subarachnoid spaces



## MIMER MEDICAL COLLEGE, TALEGAON (D)

### Consolidated report on retest exams- Community Medicine

Year	No. of students	Answer Sheets.
2020-2021	Nil	Nil
2019-2020	6	Yes
2018-2019	Nil	Nil
2017- 2018	7	Yes
2016- 2017	2	Yes

*S.L.*  
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Page No.   
 Date

Preliminary Examination

(III / II) Term.

Roll no - 13

Subject - PPTA

[ Ankita B Bange ]

Q 1 m.c.p [Section A]

- 1 A 14 - C
- 2 D 15 - C
- 3 B 16 - A
- 4 D 17 - C
- 5 C 18 - B
- 6 A 19 - B
- 7 B 20 - B
- 8 A 21 - C
- 9 A 22 - B
- 10 B 23 - C
- 11 A 24 - B
- 12 D 25 - B
- 13 A 26 - B



Preliminary examination  
Mobile no. 9503267275  
Ankita B. Bhangre

Roll no - 13

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Date	

27 B

28 A

29 C

30 B

Exam: Preliminary Examination (III/II) Term

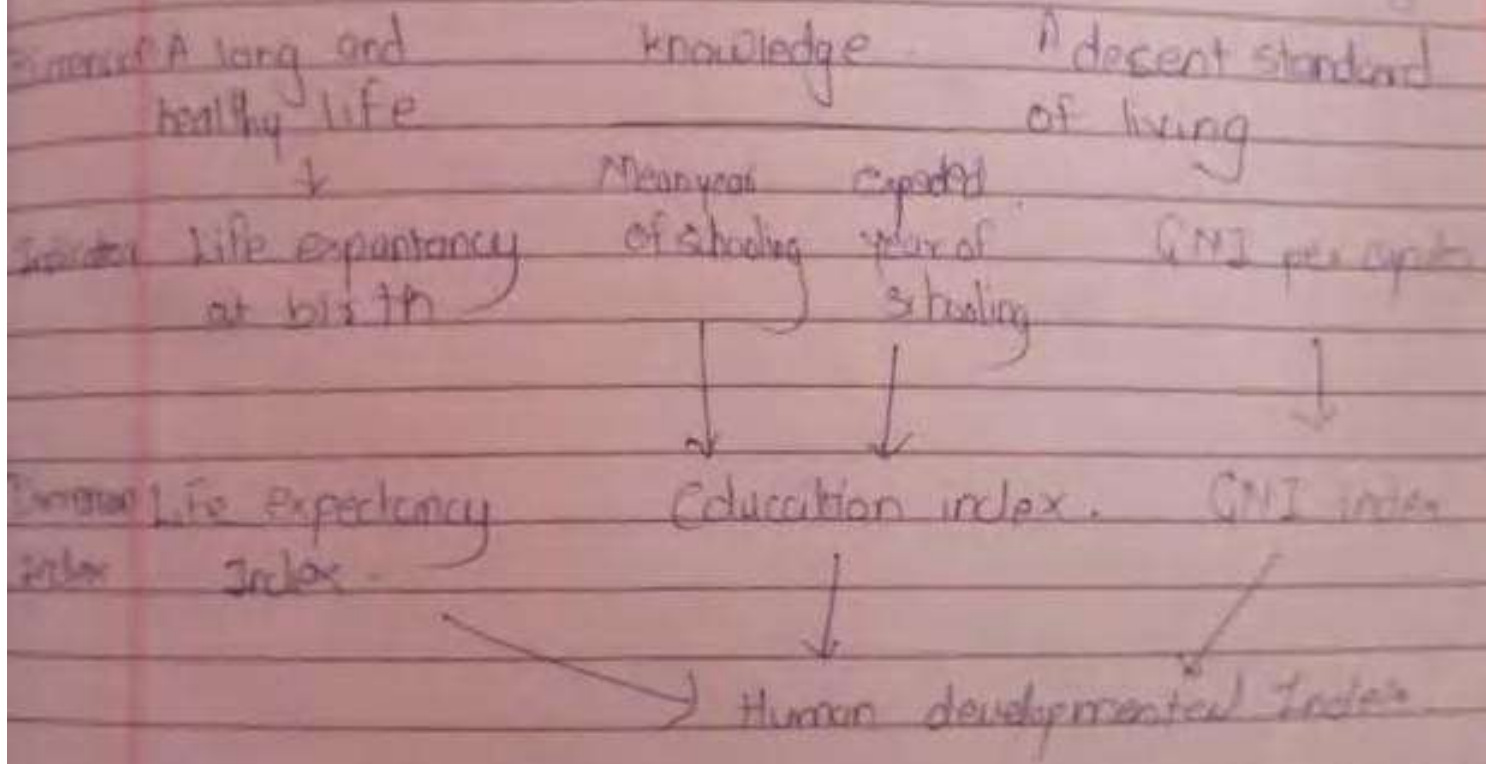
Semester: 13

Subject: PSM (Theory)

### Q.1) Human development Index.

Defined as - a composite Index focusing on 3 basic dimensions of Human development

- 1) To lead a long & Healthy life.
- 2) A ability to acquire knowledge
- 3) A ability to achieve a decent standard of living



Thus, this concept of HDI reflects achievement in the most basic human capabilities viz. leading a long life - being knowledgeable and enjoying a decent standard of living



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Page No.	2
Date	

Preliminary Exam (II/II) Term

Roll no - 13

Subject PSM

These are steps to estimate the Human Development Index.

Step 1 - Creating the Dimension Index.

Minimum and maximum values are set in order to transform the indicators into indices bet<sup>n</sup> 0 to 1.

Step 2. Aggregating the subindices to produce the HDI.

The link bet<sup>n</sup> the economic prosperity & Human Development is neither automatic nor obvious. Countries with similar income per capita can have very different HDI values.

Pathology Exam (11th) Term

Roll no 13

Seat No 20

2 Risk factor for diabetes

Obesity → obesity is particularly central adiposity has long been accepted as a risk factor for type 2 diabetes and risk is related to both the duration & degree of obesity

Maternal diabetes → offspring of diabetic pregnancies including gestational diabetes are often born at a birth. They tend to develop obesity during childhood

Sedentary lifestyle → Develop type 2 diabetes due to lack of exercise.

Diet → A high saturated fat intake has been associated with high risk of glucose intolerance & higher fasting glucose & insulin levels.

Alcohol → excessive intake of alcohol can increase the risk factor & damage pancreas & liver.

Viral infection → Viral infection may trigger immunogenetically susceptible people or sequence of events resulting in  $\beta$ -cell death

Chemical agents → which are toxic to  $\beta$ -cell  
Other factors → stress which is most important factor

Social class - shows lifestyle, education, etc. part of status



11/6/20 1503267215

University Exam (III) Term

Roll no. 13

Advt 15/19

### Levels of prevention

#### 1. Primordial prevention

This is primary prevention in its emergence or development of risk factors in countries or population group in which they have not appeared for e.g. many adult health problems obesity, hypertension.

Other problems - smoking, eating patterns. The main intervention in primordial prevention is through individual and mass education.

#### 2. Primary prevention

Action taken prior to the onset of disease. Primary prevention may be accomplished by measure designed to promote general health and well being, a quality of life of people. self protective measure.

#### 3. Secondary prevention

Secondary prevention act which halts the disease and its incipient stage and prevents complications.

Specific interventions are early diagnosis (screening test, case finding)

It may also protect others in the community from acquiring the infection and thus provide...

Mobile no: 9103267275

Page No:	
Date:	5

Preliminary Exam (III/II) Term

Roll no - 13

Subject - BM

4) Tertiary prevention.

Process has advanced beyond in its early stages, it is still accomplish prevention by what might be called tertiary prevention.

All measures available to reduce or limit impairment & disabilities, minimize suffering



Microbiology

Practical Exam [ ] [ ] [ ]

Roll no - 13  
Subject - BSM

### Q.5. a) Investigation of food poisoning

- a) Secure complete list of people involved and their histories.
  - All people who ate food and shared food, previous 2 days and place of consumption, time of onset of symptoms (stomach pain, vomiting, diarrhoea, abdominal pain, headache, fever) in order to occurrence of illness.
- b) Laboratory investigation - This will tell the nature of organism. stool sample of the kitchen employees and food handlers should be investigated.
- c) Animal experiments - It may be necessary to feed this to a mouse monkey with remaining food. Protection test give useful in case of botulism.
- d) Blood for antibodies - This is useful for retrospective diagnosis.
- e) Environmental studies - This include inspect of eating place, kitchen, & question of food handlers regarding food preparation.
- f) Data analysis - The data should be analysed according to the descriptive method of time, place & person.

### Delimiting Area (II/II) term

Page No. |  
Date |

### 13.4 Integrated Vector Management

The IVM BDCP aims to achieve effective vector control by appropriate biological, chemical & environmental intervention of proven efficacy separately in as in combination as appropriate area through the optimal use of resource.

- Measures for vector control include:
  - Measures to control adult mosquitoes:
    - IRS
  - Anti larval measures - chemical, biological & environmental.
  - Personal protection - use of bed-net, including insecticide treated nets.

The malaria control programme is using IRS as the primary method of vector control in rural setting, and anti-larval measures in the urban areas.

High risk area and population re-defined at least annually.

Alternative to malathion and synthetic are DDT

IRS is still preferred method in hot & summer where IIT are not acceptable to population.



Preliminary Exam (I) / (II) Term

Roll no. 13

Subject: PSM

(Q.3) d) MDT in Leprosy.

Objectives

- to interrupt transmission of infection to the community by sterilizing infectious pt as rapidly as possible with bactericidal drugs.
- to ensure early detection and treatment of cases to prevent deformities.
- to prevent drug resistance.

The multidrug treatment has the additional advantage of curtailing the duration of time treatment of leprosy considerably.

Def: only bactericidal drugs are used. At present, a small group of such drugs are available these are rifampin, clofazimine, ethionamide & protionamide.

MDT is not contraindicated in pt with HIV infection. Management of leprosy and lepra reaction is same as that of any other leprosy pt.

Belonging Group (III / II) Term

13  
(15/14)

Since leprosy is exacerbated during pregnancy, it is important that MDT be continued. MDT is safe in pregnancy.

A defaulter who returns to the health center for treatment should be given a new course of MDT.



Preliminary Exam (III/II) Term

Roll no - 13

Subject -

Q 3. i) prevention of Road accidents

Accidents don't just happen they are caused. The causes in a given situation must be identified by epidemiological method.

1. Data collection

Detailed environmental data relating to road, vehicle, weather et c must also be collected.

2. Safety education

The widespread belief that road accidents are inevitable.

Safety education should start from school. Young people need to be educated regarding risk factor, traffic rules.

3. Promotions of safety

a) Seat belts  
 Safety permits children.

b) Alcohol and other drugs.

c) Primary care

d) elimination of causative factors

e) enforcement of laws.

f) Accident research

g) Rehabilitation services.

Presonary Exam (II / II) Term

Roll no - B  
Subject

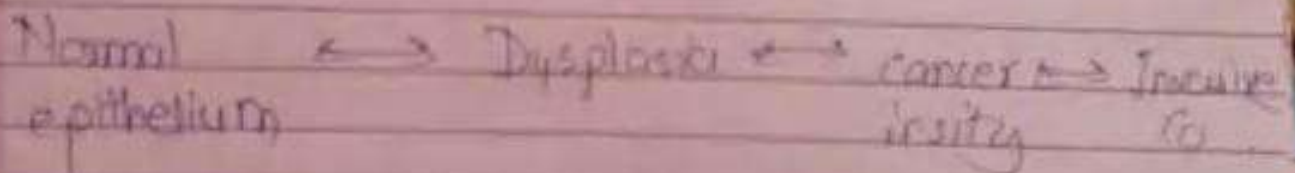
Section C

→ Warning signs of cancer

- a lump of hard mass in the breast
- a change in waist or mole
- a swelling or sore throat does not get better
- unexplained loss of weight
- blood loss from any natural orifice

Cancer cervix

The disease, cancer cervix, seems to follow a progressive course from epithelial dysplasia to carcinoma in situ to invasive ca.



Causative agent → HPV - sexually transmitted as a cause of cervical cancer.

Risk factors → Age → Cancer cervix affects relatively young women 25-45

Genital warts → Part or present occurrence of clinical genital warts

Mental status → Cancer are less likely to smoke or alcohol

OC Pills → Cause increase cervical cancer



Mobile no - 9502241275

Preliminary Exam (III / II) term

no. 13

subject

Prevention & control.

- a) Primary prevention  $\rightarrow$  Until causative factors are more likely clearly understood, there is no prospect of primary prevention of trachoma. To improve personal hygiene & with control.
- b) Secondary prevention  
The rest on early detect<sup>n</sup> in cases through screening & treatment by radical surgery or radiotherapy.

## Breast Cancer

Risk factor -

Age  $\rightarrow$  Breast Cancer is uncommon below age of 25, the incidence is T rapidly both 25 to 50.

Women who have developed Breast Cancer below  $\bullet$  have developing a 2<sup>nd</sup> breast cancer.

Family history - The risk is high in those with positive family history.

Parity  $\rightarrow$  early full-term pregnancy to have protective effect.  
Delayed pregnancy high risk.

## Preliminary Exam (IIL/II) Term

Roll no - 13

Subject -

Diet - obesity,  
socio-economic - Higher - socio-economic  
groups

Prevention -

a) primary prevention.

The average age at menarche can be increased through a reduction in at menarche can be increased through a reduction in childhood obesity,  
↑ in strenuous physical childhood activity

b) Secondary prevention.

Breast screening leads to early diagnosis of breast cancer, which in turn, influence treatment and hopefully mortality.

Top component is 2° prevention is follow up:  
i.e. to detect recurrence

as early as possible, to

to detect cancer in the opposite breast  
as early as possible



Preliminary Exam (III / II) term

roll no - 13

subject PSM

1) Observational studies

a) Descriptive studies

b) Analytical studies

i) Ecological or Correlational

ii) cross-sectional

iii) case-control

iv) Cohort

2) Experimental studies Interventional studies

a) Randomized control trial / control

b) Field trials

c) Community trials

Case Control study.

Called retrospective studies which are common 1<sup>st</sup> approach to test causal hypothesis.

In recent years -

Now, case control approach has emerged as a preminent method of epidemiological investigation

## Preliminary exam (III) Term

2014-13

1994 - 1997

### Basic steps

- 1) Selection of cases and control.
  - The prior definition of what constitute a case in to case study.
  - 1) Diagnostic criteria - of the disease and the stage of disease.
  - 2) Eligibility criteria - ~~the~~ A criterion customarily employed is the requirement that only newly diagnosed (incident) cases within a specified.

### 2. Selection of controls.

Source of control - The possible source from which control may be selected include hospitals, relatives, neighbours.

- 1) Hospitals controls.
- 2) Relatives
- 3) Neighbourhood controls
- 4) General population.

### 3. Matching

Matching is defined as the process by which we select ~~with~~ controls in such a way that they are similar to cases with regard to certain pertinent selected variables which are known to influence the outcome of disease.



Preliminary exam (IT/IT) exam

Roll no - 13

subject PSTA

Q. 8) Sewerage

Sewerage is waste water from a community, containing solid & liquid excreta, derived from house, street, washing yards, factories, and industries.

Method of excreta disposal

1. Unsewered areas

• Service type latrines

2. Non-service type (sanitary latrines)

a) Bore hole latrines

Dug well or pit latrine

Water seal type of latrine

Septic tank

3. Latrine suitable for camps and temporary use

• Shallow trench latrine

pit latrine

II Sewered area

1. Water carrier system and sewerage

a) Primary treatment

Screening

Removal of grit

## Secondary treatment .

Trickling filters .

Activated sludge process

Other methods

Sea outfall

River outfall

sewage farming .

## Modern sewage treatment .

### 1. Screening .

Sewage arriving at a disposal works is first passed through a metal screen which intercepts large floating objects such as pieces of wood, rags, masses of garbage and dead animals .

### 2. Grit chambers .

Sewage is then passed through a long narrow chamber .

The chamber is approx 10 to 20 meters in length .

### 3. Primary sedimentation

sewage is now admitted in a huge tank called primary sedimentation tank .

The organic matter ~~stages~~ ~~stagnate~~ settle down and are called sludge .



**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams- ENT**

<b>Year</b>	<b>No. of students</b>	<b>Answer Sheets.</b>
2020-2021	01	01
2019-2020	01	Yes
2018-2019	01	Yes
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil

Dr. Sankar K K  
Ar  
ENT  
MIMER Medical College  
Talegaon (D)

Name:- Bhadewad Amol Kisanrao

Sub:- ENT practical prelims.

Roll No:-

Page No:- 1

### Section A - long case.

Q.1 Clinical findings.

Clinical findings of throat

- Recurrent attack of sore throat or acute tonsillitis.
- Chronic irritation in throat with cough
- Bad taste in mouth and foul breath
- Difficulty in swallowing and choking spells at night.

### Clinical findings of ear.

- Fullness or heaviness in the ear
- Severe ear pain at night
- Deafness
- Tinnitus (ringing or buzzing in the ear)
- Autophony (spoken words of patient echo in his ears)
- TM (ear drum) gets retracted
- Cart-wheel appearance of ear drum
- Absence of light reflex.



(Q2) Investigation of ~~throat~~

~~Q2~~ throat.

- Tonsils may show varying degree of enlargement. Some times they meet in the midline (chronic parenchymatous type)
- Tonsils are small but pressure on the anterior pillar expresses Rank power cheesy material (chronic fibrous type)
- ~~Acute~~ flushing of anterior lip pillars compared to the rest of the pharyngeal mucosa is an important sign of chronic tonsillar infection.
- Enlargement of Jugulo-digastric lymph nodes is a reliable sign of chronic tonsillitis. During acute attacks, the nodes enlarge further and become tender.

Ear.

- 1) Examination of nose / pharynx
- 2) Hearing test
- 3) microbiological studies! on the ear discharge
- 4) Radiology of mastoid
- 5) tests for patency of Eustachian tube. If the ear drops reaches the throat the tube is patent.
- 6) otomicroscopy
- 7) fistula test
- 8) Examination of the CSF for intracranial complications.



## Management.

### Tonsillitis (throat)

- 1) Conservative treatment consist of attention to general health, diet treatment of co-existent infection to teeth, nose and sinuses.
- 2) Surgical:-  
Tonsillectomy is indicated when tonsils interfere with sleep, speech, deglutition and respiration or cause recurrent attacks.

### Management of Ear (Otitis media).

- 1) Aural toilet:- Remove all discharge and debris from the ear.
- 2) Ear drops:- Antibiotic ear drops containing neomycin, polymyxin, chloramphenicol or gentamicin are used.
- 3) Systemic antibiotics:-
- 4) Precaution- patients are instructed to keep water out of the ear during bathing, swimming and hair wash, etc.
- 5) Treatment of contributory causes:- Attention should be paid to treat concomitantly infected tonsils, adenoids, maxillary sinus and nasal allergy.
- 6) Surgical treatment:-  
Aural polyp or granulations if present, should be removed before local treatment with antibiotics.



- 7) Reconstructive Surgery -  
 once ear is dry, myringoplasty with  
 or without ossicular reconstruction  
 can be done to restore hearing.  
 closure of perforation will also  
 check repeated infection from the  
 external canal.

### Complications.

Ear

- 1) Pain: it is uncommon in uncomplicated
- 2) vertigo: it indicates ~~erosion~~ erosion  
of lateral semicircular canal.
- 3) Persistent headache
- 4) facial weakness
- 5) A listless child refusing to take feeds
- 6) Fever, nausea, and vomiting
- 7) Irritability and neck rigidity
- 8) Diplopia.

### to throat. (tonsillitis)

- 1) Peritonsillar abscess
- 2) Parapharyngeal abscess
- 3) Intartonsillar abscess
- 4) Tonsilloliths.
- 5) Tonsillar cyst
- 6) focus of infection in rheumatic  
fever, acute glomerulonephritis, eye  
and skin disorders.



## Section B - Short Case.

Q.1] Diagnosis :- Hypertthyroidism with thyroid swelling.

Q.2] A thyroid swelling moves upwards on deglutition. This is due to the fact that the thyroid gland is fixed to the larynx.

Other swellings which may move on deglutition are thyroglossal cysts, subthyroid bursitis and prelaryngeal or paratracheal lymph nodes fixed to the larynx or trachea. Such movement of the thyroid becomes greatly limited when it is fixed by inflammation or malignant infiltration.

Q.3]

## Investigations

A careful examination should record the size, shape and consistency of the gland. The number of dimensions and consistency of any nodules should also be recorded.

Importantly, in patients with long, thin necks nodules may be extremely difficult to detect. The accuracy thyroid palpation depends greatly on the experience of the examiner.



## Laboratory Investigations.

patients with goitre thyroid nodules should have a serum thyroid stimulating hormone (TSH) to determine the current functional status of the thyroid. If the TSH is abnormal, a free  $T_4$  and  $T_3$  should also be checked. checking for antibodies against thyroperoxidase and thyroglobulin is ~~recom~~ recommended as thyroid autoimmunity may coexist with goitre.

If the patient is hyperthyroid, a thyroid receptor antibody can help to confirm graves disease.

- Thyroid scan and xray thyroid.
- Thyroid function test
- Serum protein bound iodine,
- Total serum triiodothyronine, serum TSH

## Treatment.

- Iodine supplementation
- thyroxine suppression
- Thiouramides (carbimazole or propylthiouracil)
- radioactive iodine ( $I^{131}$ ) ablation and surgery
- Thyroid hormone replacement therapy.



Q.4]

Hyper

If left untreated, hyperthyroidism can cause serious problems with the heart, bones, muscles, menstrual cycle, and fertility. It can also lead to health problems for the mother and baby.



## Section C.

## X ray

a. 1] X ray mastoid schullers view

2] Diagnosis: - mastoiditis.

3] → Complications

- Hearing loss
- facial nerve palsy
- Cranial nerve involvement
- Osteomyelitis
- Petrositis
- labyrinthitis
- Gradenigo syndrome - otitis media, retro-orbital pain and abducens palsy
- Intracranial extension - meningitis, cerebral abscess, epidural abscess, subdural empyema.

4] Schuller's view is a lateral radiographic view of skull principally used for viewing mastoid cells. The central beam of X rays passes from one side of the head and is at an angle of 25° caudad to radiographic plate.

This angulation prevents overlap of images of two mastoid bones.



page no - 9

Chart.

Identification: PTA showing air bone conduction.



Instrument .

(a1)

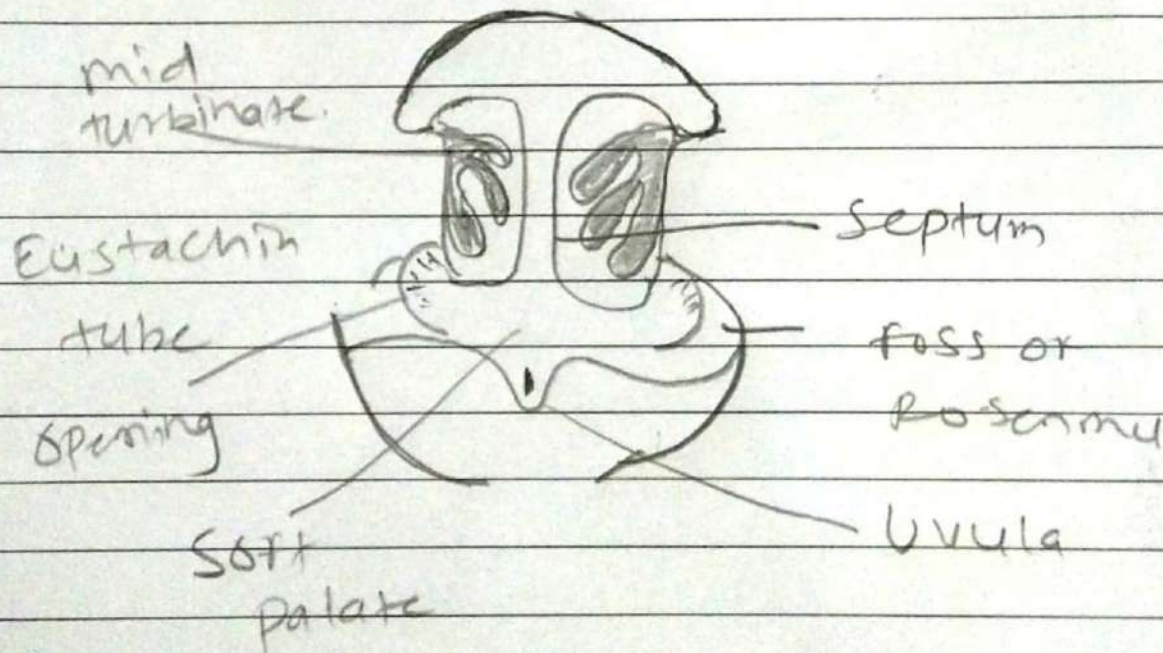
Identification

Posterior rhinoscopy mirror.

(a2)

Posterior rhinoscopy.

(a3)





Section - C

Q1 }  
X-Ray

- ① Identification → X-ray Mastoid Schullers view
- ② Diagnosis → MASTOIDITIS
- ③ Complications →
  - (a) Hearing loss
  - (b) Facial nerve palsy
  - (c) Osteomyelitis
  - (d) Petrositis
  - (e) Labyrinthitis
  - (f) Sigmoid Sinus thrombosis
- ④ Anatomical Structures →
  - (a) Tegmen
  - (b) Mastoid Air Cells
  - (c) External auditory canal
  - (d) Dural plate
  - (e) Sinus plate

Seen } Sino-dural angle

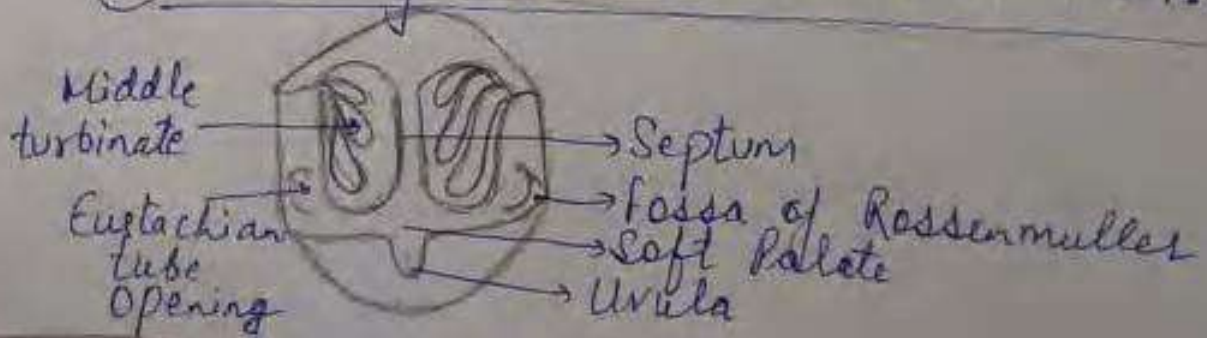
Q2 }  
Chart

Investigation → PTA showing Air Bone Conduction which depicts  
SENSORI-NEURAL HEARING LOSS

Q3 }  
Instrument

St. Clair Thompson

- ① Identification → Posterior Rhinoscopy Mirror.
- ② Investigation done with Mirror → Examination of (a) Post nasal space by Posterior Rhinoscopy & (b) Nasopharynx
- ③ Picture of Structures seen with Mirror





Section - B

Short Case

AMANDEEP SANGHA  
ENT Prelims  
[Repeater]

Name → Miss A  
Age → 20 years      Sex → Female  
Occupation → Student  
Address → Dapodi

CC → Wt. gain  
Cold Intolerance } Since  
dysmenorrhoea      } few  
Constipation        } Months  
Lethargy

① Diagnosis → HYPOTHYROIDISM with Swelling of Thyroid gland

② Reason why swelling moves on Swallowing →  
The gland is attached to sides of larynx &  
the larynx moves upwards on Swallowing  
So, the swelling moves upwards while  
Swallowing.

Systemic Sequelae in this Patient

- low levels of thyroid
- Iodine Deficiency

③ Investigations

BLOOD TESTS → TSH Test [Thyroid Stimulating Hormone]  
→ T4 (Thyroxine test)

Treatment → Thyroxine Replacement Therapy  
{ LEVOTHYROXINE }

④ If left Untreated, hypothyroidism can lead to many complications such as! —

- (a) Heart Problems
- (b) Nerve Injury
- (c) Infertility
- (d) Death in severe cases.
- (e) Increases risk of Miscarriage
- (f) Obesity
- (g) Joint Pains.
- (h) Myxedema



Section A

Long Case

Name → MAS. K.  
Age → 7 years      Sex → Male  
Occupation → Student  
Address → —

Chief Complaints  
a) Pain in Ear → Present → Rt. Ear → Since childhood  
b) Pain in throat → Present → intermittent Since 10 days  
c) → fever → (+)  
d) → fatigue → (+)

O.D.P. →

Past/H → No significant H/o any illness

Family/H → No significant

Personal/H → Sleep, Appetite, Bowel, Bladder. (N)

General Exam → Ht, wt., Pulse, Pallor, Cyanosis, Clubbing, Icterus, Dedema, Lymphadenopathy

Local Exam → EAR

External Ear → (N)  
Post-Auricular Region → (N)  
Ext Auditory Canal → (N)

Tympanic Membrane  
• Pars flaccida → (N)  
• Pars tensa → Retraction (+)  
• Handle of Malleus → (+)  
• Cone of Light → (+)  
• Mobility → (-)  
• Mucosa → Pink Heist  
• Fistula test → -ve

Tuning Fork tests

- Rinne's
- Weber's
- ABC

ORAL CAVITY

- Lips
- Tongue
- Cheek
- Teeth
- Buccal Mucosa
- Palate

EXAMINATION OF NOSE, NECK

OROPHARYNX

- Tonsils → Increased in size  
→ Congested Ant Pillar
- Ant. & Post Pillar → Congested
- Post. Pharyngeal Wall → Congested

Investigations

EAR

- X-ray Mastoids
- Audiometry
- Otomicroscopy
- Culture sensitivity of Discharge
- CT Scan of Mastoid

THROAT

- Routine Haemogram
- X-ray chest

PROVISIONAL DIAGNOSIS → TONSILLOADENOID HYPERTROPHY with PARS TENSA RETRACTION

MANAGEMENT

For Chronic Tonsillitis

MEDICAL

- Tab. Siproflaxacin 100mg <sup>BD x 5 days</sup>
- Tab. CombiFlam 500mg <sup>TID x 5 days</sup>

SURGICAL

→ TONSILLECTOMY // ADENOIDECTOMY

- Anaesthesia → LOCAL
- Position → Supine, with Extended Neck.



## Steps

(3)

### Dissection Method

- (a) Exposure  $\rightarrow$  Mouth open with Mouth gag
- (b) Incision taken on 4th pillar, stretched by depressor of tongue
- (c) Separation of tonsil from capsule by blunt dissection, held by tonsil holding forceps.
- (d) Ligate pedicle & crush
- (e) Remove tonsil out.
- (f) Apply pressure at site.
- (g) Packing done
- (h) Haemostasis checked

## II

MEDICAL  $\rightarrow$  Inj TT  $\rightarrow$  0.5 ml  
Cap. Ampicillin 500 mg TDS  
Cap. b. Complex - OD  
Cap. Cetirizine - 10 mg BD

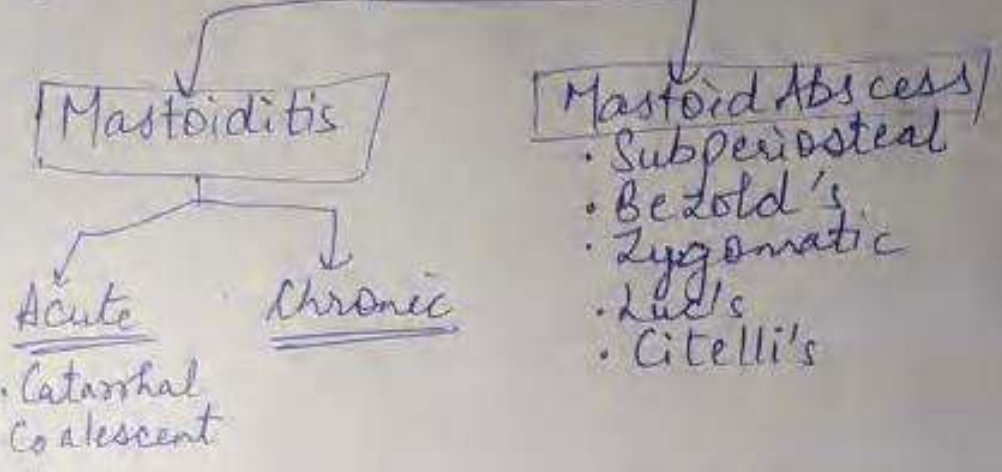
### Surgical $\rightarrow$ Tympanoplasty

Anaesthesia  $\rightarrow$  LOCAL

- (a) Incision taken in Meatus
- (b) Temporalis fascia taken, graft harvested
- (c) Edges & undersurface of perforation prepared
- (d) Tympanomeatal flap elevated
- (e) Mobility of ossicles checked
- (f) Underlay grafting done
- (g) Wound closed
- (h) Mastoid bandage done
- (i) Post-OP Management
- (j) Inj Ampicillin 500 mg slowly
- (k) Inj Diclofenac sodium  $\rightarrow$  deep i.m. stat

# Q3 Complications of Otitis Media

## I → Mastoid Infection



## II → Extracranial

- Petrositis
- Labyrinthitis
- Facial Nerve Palsy

## III → Intracranial

- Extradural Abscess
- Subdural abscess
- Brain abscess
- Meningitis
- Septic Sinus thrombophlebitis
- Otitic hydrocephalus.

# Complications of Tonsillitis

- Otitis Media
- Quinsy
- Obstructive Sleep Apnoea



M.C.Q's

1 → A

2 → D

3 → A

4 → B

5 → A

6 → A

7 → C

8 → C

9 → B

10 → B

11 → A

12 → B

13 → A

14 → C

15 → A

16 → D

17 → C

18 → D

19 → C

20 → B

**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams- Ophthalmology**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	Nil	Nil
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil

  
Professor & Head  
Dept. of Ophthalmology,  
MIMER Medical College,  
Talegaon (Debra), Dist. Pune



**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams – Gen.Medicine**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets</b>
2020-2021	Nil	Nil
2019-2020	02	03
2018-2019	03	03
2017- 2018	02	02
2016- 2017	05	06

*[Signature]*  
Asst. Prof. Medicine Dept  
MIMER Medical College  
Talegaon Dabradi

SEAT NO.					QUESTION BOOKLET VERSION				
A	B	C	D	E	A	B	C	D	E
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2	0	0	0	0	2	0	0	0	0
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Roll No. \_\_\_\_\_

Subject: Physics

Page: 11

Roll No. (in words): One Two Eight

QUESTION BOOKLET VERSION IS \_\_\_\_\_

Q. No.	1	2	3	4	5	6	7	8	9	10
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Q. No.	11	12	13	14	15	16	17	18	19	20
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Q. No.	21	22	23	24	25	26	27	28	29	30
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This is to certify that the entries of Seat No. Question Booklet, Version No. and Subject have been verified.

CANDIDATE'S SIGNATURE: \_\_\_\_\_

INVIGILATOR'S SIGNATURE: \_\_\_\_\_

Date: 27/04/2019

USE BLUE / BLACK BALL POINT PEN ONLY

- INSTRUCTIONS**
- DARKEN THE CIRCLE **ONCE ONLY** USING BALL POINT PEN.
  - DARKEN THE CIRCLE FOR EACH QUESTION AS SHOWN BELOW.
- | WRONG                   | CORRECT                            | WRONG                              | WRONG                   |
|-------------------------|------------------------------------|------------------------------------|-------------------------|
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| c <input type="radio"/> | c <input type="radio"/>            | c <input checked="" type="radio"/> | c <input type="radio"/> |
| d <input type="radio"/> | d <input type="radio"/>            | d <input type="radio"/>            | d <input type="radio"/> |
- NO MARKS WILL BE GIVEN TO WRONG ENTRIES.
  - NO MARKS WILL BE GIVEN IF THE ENTRY IS ERASED BY STRIKING OR USING WHITE INK.
  - DARKEN THE CIRCLE PROVIDED. DO NOT MAKE ANY STRAY MARKS ON THE ANSWER SHEET.
  - ROUGH WORK MUST NOT BE DONE ON THIS ANSWER SHEET.
  - USE FREE SPACE IN THE QUESTION BOOKLET PROVIDED.

$9\frac{1}{2}$   
15

*[Signature]*

Personal date: 10/1/2015 Sign of teacher (Assessor): \_\_\_\_\_





MAHER'S  
 MAHARASHTRA INSTITUTE OF MEDICAL EDUCATION & RESEARCH  
**MEDICAL COLLEGE**

DR. BHANUSHEB SARDESAI TALEGAON RURAL HOSPITAL  
 TALEGAON DABHADE (PUNE - 410 507)  
 Accredited by NAAC with 'A' grade

**ANSWER - BOOK**

Roll No. 108 M.D.B.S. III (II) MBBS Term 9th sem  
 Examination Prelim. exam Subject Microbiol  
 Paper Part II Section B Date 27/09/2019

Q. No.	Sub Question										TOTAL MARKS
	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H	9/I	10/J	
1	29	2	1	1	2						35
2											2
3											
4											
5											
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8											
9											
10											
Total Marks in Digits											37
Total Marks in Words											thirty seven

Perusal date 11 / 10 / 19

Sign of teacher (Assessor) [Signature]

Sign of student [Signature]

Sign of H.O.D. \_\_\_\_\_

## I) Magna

Differs in clinical character from the other two types caused due to involvement of the motor neurons. Clinical character depends on these motor neurons.

- 1) Dementia
- 2) Depression
- 3) Diarrhoea

### Clinical features -

#### I) Mental Clinical features:

- 1) dementia
- 2) depression
- 3) anxiety
- 4) fatigue
- 5) Insomnia

II) Spinal cord involvement - both the parallel and lateral columns are involved in it.

Spastic paraparesis syndrome characterized by spastic weakness of the legs.

III) Alimentary involvement include:-  
Angular Chilitis.

IV) Skin - erythematous structures occur on the skin of symmetrical shape.

Acute dermatitis characterized by vesicular crusting and scales, crusting.

Chronic dermatitis characterized in severe cases.



Treatment  
= 100 mg/day Nicotinamide to be given daily  
Nucleic Acid diet & High calories  
diet

Drug induced pellegra - isoniazid, phenytoin,  
phenobarbitone, carbamazepine are  
the few drugs which cause pellegra.

## 1) Addison's Disease

Addison's disease is caused due to dysfunction or dysfunction of the adrenal gland.

The disease causes deficiency in the corticosteroid secretion.

Causes -

1) Genetic cause - Congenital adrenal hyperplasia

## 2) Trauma

3) Adrenal deficiency syndrome - In this there is deficiency in the secretion of the adrenaline.

4) Metastasis in adrenal gland caused by cancer of breast, stomach, lung.

## 5) Lymphoma

## 6) Autoimmune adrenalitis

7) Adrenaline Infarction - SLE

- Polyarteritis

- Anti phospholipid syndrome

8) Infections due to tuberculosis, fungal infections

9) Other - Sarcoidosis

- Amyloidosis

10) Drug induced - Adrenolytic therapy



Common features  
1) Hypertension  
2) Hypokalaemia  
3) Hypocortisolism  
4) Hypocortisolemia

Cardinal features - Hypertension  
- Hypokalaemia

History of acute adrenal syndrome  
Hypokalaemia - nausea, vomiting

Hypokalaemia - nausea, vomiting  
Hypertension, hypokalaemia  
Hypocortisolemia

ACTH ~~stimulation~~ test - leads to pigmentation  
in elbows, knees, knuckles and pressure  
points

Hypokalaemia  
ACTH ~~stimulation~~ test - mineralocorticoids  
lead into hypokalaemia

Depletion of body has taken place mostly in  
kidneys

Investigation show elevated ESR levels, Uric acid  
levels, hypernatremia, hyperkalemia.  
Plasma ACTH less than  $2 \text{ ng/dl}$  in  $8 \text{ am to } 9 \text{ am}$   
is ~~confirm~~ confirmation

Treatment by Cortisolone -  $10 \text{ mg}$  in morning  
 $5 \text{ mg}$  in evening

Prednisolone -  $5 \text{ mg}$  in morning  $2.5 \text{ mg}$  in eve  
ning

Hydrocortisone -  $0.05$  to  $0.1 \text{ mg}$

## 3) Parkinson's Disease Treatment

### The new Treatment

The patient with Parkinson's disease should be treated by a physician with a thorough knowledge of the drug therapy for the disease.

### Drug therapy -

- 1) ~~low~~ L-Dopa: the combination used for treating Parkinson's disease is  
L-Dopa + Carbidopa 10:1 or 1:1 ratio  
L-Dopa + Benzerzide 10:1
- 2) Anticholinergic: Trihexyphenidyl, levihexol & ~~atropine~~ triphenol
- 3) Amantadine - has potential to cause anti-parkinsonian effects
- 4) Ergot derivatives such as bromocriptine pergolide, cabergoline
- 5) Non-ergot derivatives such as apomorphine pramipexole, ropinirole
- 6) Catechol-O-methyltransferase - entacapone
- 7) Rivastigmine
- 8) MAO-B inhibitors - selegiline

1.





Levodopa combination dose is  
started at 50mg daily and  
assessment is done on daily  
basis to decide the actual amount  
required

Not more than 100-1000mg daily  
is to be given.

2. The main objectives of the management of meningitis are to control the infection, reduce the inflammation, and prevent complications.

- Neuroimaging is required to find out the infection.
- Histopathology should be done.
- Angiogram
- MRI to be done if required in acute period.
- Histopathology should be done.

### Treatment

- Stroke - should be managed by supportive measures.
- CNS and systemic measures must be taken.
- Care of the risk factors should be taken.
- Intracerebral haemorrhage & abscesses should be dealt with.
- Subarachnoid haemorrhage should be treated.
- Infective condition should be halted by giving antimicrobial drugs.
- Neoplasms will require surgery.



- 1.5] Immunization
- Autoantibodies and immunizations can be done as
- 1) Anti DNA
  - 2) Anti ANA
  - 3) Anti nucleolar antibodies
  - 4) Anti RNA
  - 5) Anti histone
  - 6) Anti cardiolipin
  - 7) Anti platelet
  - 8) Anti neuronal bodies

these are seen

Anti nucleolar is the best screening test

Other abnormalities

- 1) ESR is raised
- 2) Anaemia
- 3) there is low amount of C3 & CH
- 4) active nephritis
- 5) urinalysis should be done
- 6) Blood urea to be done
- 7) Proteinuria to test
- 8) Cellular cast
- 9) Serum Creatinin should be done.

- Paying close atten for relapse
- Renal biopsy
- Protona Rheumatoid fac in pt
- Test for syphilis are false positive
- MRI of Brain spinal cord

### Management

Eye pain and skin inflammation with NSAIDs

Hydroxychloroquine to be given for skin lesions and Azathioprine

Quinine to be given for skin lesions

Photosensitive skin lesions require sunscreens Creams/lotion

Pt with severe condition should be given corticosteroids

Pt with proliferative glomerular nephritis should be given prednisolone for 30 days

Immunosuppressant - Cyclophosphamide azathioprine.

Belimumab, a monoclonal human antibody can be given in very severe case.





Section - C  
Semester - 9th

Supervisor's Signature

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TALEGAON DABHADE (PUNE - 410 507)  
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10/20

**ANSWER - BOOK**

Roll No. 108 M.B.B.S. III (C) MBBS Term 9th sem  
 Examination Practical exam Subject Medicine  
 Paper II Section C Date 27/09/2019

Q. No.	Sub Question										TOTAL MARKS	
	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H	9/I	10/J		
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Total Marks in Digits												
Total Marks in Words												

Perusal date   /  /   Sign of teacher (Assessor) \_\_\_\_\_

Sign of student *Devi* Sign of H.O.D. \_\_\_\_\_

## Treatment of major depression

Mood stabilizers alone or in combination with Antidepressants can be used to treat

Anti-depressants can be also used to treat the depression.

- mood stabilizers such as lithium & Carbamazepine, lamotrigine, quetiapine & aripiprazole

- Tricyclic antidepressants can be used but are now not the first choice of drugs

- SSRIs are now a drug used as they are have less side effects - and are more safe than other drugs

eg Fluoxetine, sertraline, fluvoxamine

Other agents in Venlafaxine e.g. cognitive therapy in combination with antidepressants may be beneficial

- Imipramine & St sertraline are useful with psychotic ~~at~~ depression

ECT is indicated in selected situations like suicide, depressive stupor.



#1) Tinea corporis: It is a glabrous lesion  
It characteristically forms erythematous papules that enlarge to form a ring.  
Borders are well marked raised.

The center is ~~not~~ almost relatively normal.

Treatment - therapy with terbinafine  
ketconazole or miconazole 2 times a day.

Antifungal medicines to be used.

oral ketoconazole at 3-4 mg/kg/day may be given.

fluconazole - 50-100 mg/day at 150 mg twice daily for 2-4 weeks.

Itroconazole 100 mg can be given twice daily for 2 weeks.

Mania - mania is a condition of mental illness in which there is a disturbance in the mind.

- Clinical features - the maniac
- 1) Talkative and excessive conversation
  - 2) Increased appetite
  - 3) Decreased sleep
  - 4) Self esteem is high and grandiose feelings
  - 5) Active and responsive
  - 6) Confidence is very high
  - 7) Flighty talking
  - 8) Good character & responsive with feelings of confidence
  - 9) Increased motor activities

Diagnosis - The diagnosis is found out by simply giving keen attention -

- 1) The Pt is over talkative and talks on any subject and changes or jumps from one topic to another
- 2) The Pt has a high confidence and self-esteem and a feeling of grandiose
- 3) The Pt is active and very responsive to all the talks
- 4) Fast thought
- 5) Distraction ~~are~~

Management  
manic attack can be suppressed by with lithium carbonate.



Antipsychotic drugs can be used

Neuroleptic drugs can be used also  
like Haloperidol, chlorpromazine,  
Clozapine

Antipsychotic drugs

- 1) risperidone
- 2) quetiapine
- 3) olanzapine

Psychiatric treatment - by using regular  
doses of clozapine

### Management of Psoriasis

The process can be managed by three therapy

- 1) Local therapy which includes drug therapy
- 2) UVB therapy which is Radiation therapy
- 3) Biochemical therapy

#### Drug therapy:

- 1) Local therapy: In this the cream can be applied, ointments can be applied, application of creams

Weak steroids such as corticosteroids or high potent steroids such as clobetasol propionate etc do be given.

- 2) Radiation therapy: In this the ingestion of psoralen or application on the skin of the affected part is exposed to the UVB radiation which causes the exfoliation of the skin of the affected part.

The patient are also suggested of drinking sunlight in the morning.

Consumption of vitamin D is also of great use.

Keratinization of the skin takes place which leads to differentiation of the skin.



Biochemical therapy is given when there is no response to both the therapies.

Cyclosporin is given 2.5-5mg/kg/day for 10-12 weeks.

Etretinate has long half life and so it is not given in women.

Methotrexate is also a drug of choice.

Given women  
the therapy  
2.5 - 5mg/kg  
of life  
for women  
Vijay Chatter

### Clinical features of chronic obstructive lung disease

#### Clinical features:

- History of the most common feature
- Cough of many years in the most common clinical feature.
- Cough with sputum, sputum which is blood stained.
- Cough which was initially very low and then it gradually increased in the few years.
- Cough was initially and mainly in the morning and evening.

- Cough was initially in the summer but now all year.
- Breathlessness is more

#### Respiratory features

- Vesicular sounds on both sides
- Inspiration & expiration sternal
- Wheezing sounds heard
- Respiratory decrease
- Breathless res

#### Physical signs - weight increased patient

ie over weighted pt  
percussion felt normal  
liver and cardiac dullness are normal

Crepitation are changing

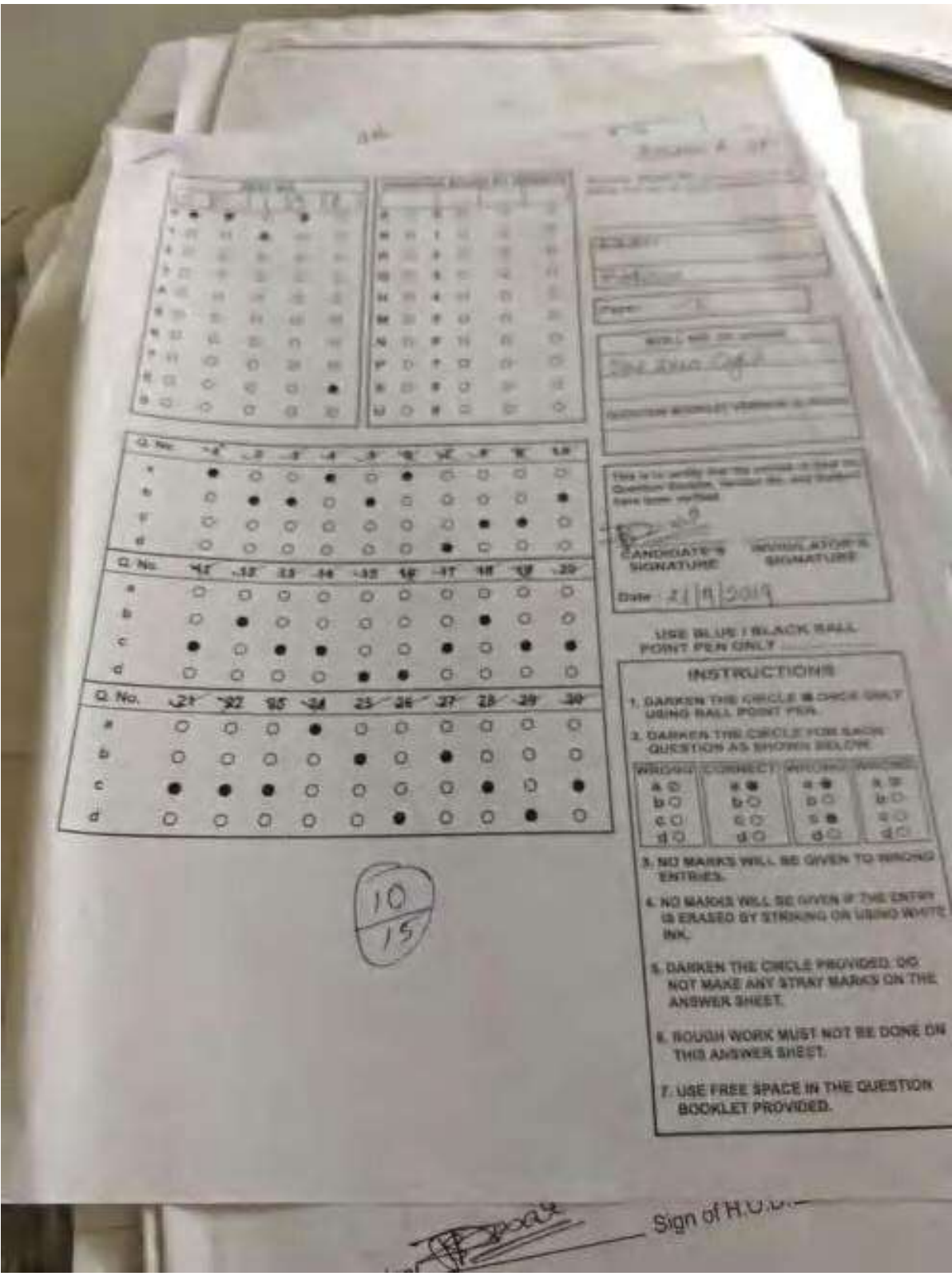


- Systemic features:
  - 1) Depression
  - 2) Osteoporosis
  - 3) Metabolic syndrome

### GOLD Classification

Stage	Clinical features	management
I	Mild / FEV <sub>1</sub> $\geq 80\%$ of the predicted	mild Bronchodilator 1-2 Salbutamol 4 Salbutamol
II	Moderate FEV <sub>1</sub> FVC 50-80% of the predicted	Moderate Bronchodilator Salbutamol add the Glucocorticoids
III	Severe FEV <sub>1</sub> FVC = 30 to 50% of predicted	
IV	Very severe FEV <sub>1</sub> / FVC less than 30% of predicted and any previous complication	Add oxygenation Therapy and Ventilation

~~with~~



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Roll No. \_\_\_\_\_

Page No. \_\_\_\_\_

Signature \_\_\_\_\_

Date: 21/11/2019

- USE BLUE / BLACK BALL POINT PEN ONLY
- INSTRUCTIONS**
- DARKEN THE CIRCLE IN CHOICE ONLY USING BALL POINT PEN.
  - DARKEN THE CIRCLE FOR EACH QUESTION AS SHOWN BELOW
- |                         |                                    |                                    |                                    |
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- NO MARKS WILL BE GIVEN TO WRONG ENTRIES.
  - NO MARKS WILL BE GIVEN IF THE ENTRY IS ERASED BY STRIKING OR USING WHITE INK.
  - DARKEN THE CIRCLE PROVIDED. DO NOT MAKE ANY STRAY MARKS ON THE ANSWER SHEET.
  - ROUGH WORK MUST NOT BE DONE ON THIS ANSWER SHEET.
  - USE FREE SPACE IN THE QUESTION BOOKLET PROVIDED.

Sign of H.U.V. \_\_\_\_\_





Year - 9th  
Section - B

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### MEDICAL COLLEGE

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#### ANSWER - BOOK

Roll No. 108 M.R.D. No. 10 III (11) Page 9th assessed  
 Examination Prelim Exam Subject Medicine - I  
 Paper I Section B Date 26/09/2019

Q. No.	Sub-Question										TOTAL MARKS
	1A	2B	3C	4D	5E	6F	7G	8H	9I	10J	
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Total Marks in Words

6/25

Perusal date

Sign of teacher (Assessor)

Sign of student

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Sign of H.O.D.

### Section 11

1) Dressler Syndrome - It is also known as post-myocardial syndrome.  
It is a type of pericarditis.  
The syndrome is autoimmune type.  
This is a process of defense on the heart which occurs after a cardiac attack or a cardiac shock etc attacks.

In this there is a change of Infection of the pericardium.  
The inflammation is such that it causes accumulation of the fluids.

#### Diagnosis -

- The patient has fever and chills due to infection.
- Chest pain is present.
- Chest fullness can be present.

- Investigations which can be done are as follows -

Blood Investigations - To find out the cause of infection and inflammation if any.

Chest X-ray - Can be done to find out the fluid content if any present.

Echocardiograph - It is the picture of the heart to confirm the findings in the X-ray.

Electrocardiograph - For checking out the abnormal impulse which can be detected.



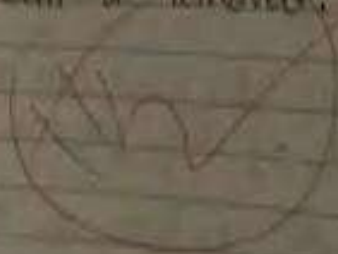
Treatment is there in a line of treatment which can be followed.

Therapeutic treatment may include the treatment for the infection and inflammation. Antibiotics can be given to the infection. Analgesic for fever.

Surgical treatment:-

Removal of the fluid accumulation:- The fluid accumulated in the pericardium can be removed by inserting a tube into the pericardium and draining the fluid.

The Removal of pericardium - when there is continuous and repetitive accumulation of the fluids the pericardial layer can be removed.



what the  
and influence  
is important

2) Malabsorption is abnormally low absorption  
in the small intestine leading to the  
body

The decrease in absorption can be due to  
low level intake of the necessary vitamins  
or due to defect in absorption

The diagnostic approach to us can be through  
two ways

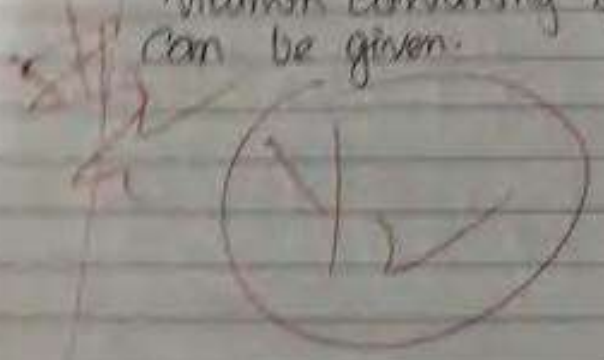
- 1) Dietary approach
- 2) Medical approach

Dietary approach - can be through  
intake of the proper diet which  
is high in calories and composed  
of nutrients

Fresh fruits and leafy vegetables which  
contain high amounts of calories and  
essential nutrients can be consumed  
from the food.

Therapeutic approach - It can be through  
supplementation of the necessary vitamins  
through medication.

Vitamin containing syrups and tablets  
can be given.





## Acute Myocardial Infarction

### Clinical features:

#### Signs & symptoms

Symptoms - The patient may be restless and in shock and

- Breathlessness and sweat of shock

- There is severe chest pain and pt cannot withstand the pain

- Jt pulse is high if the BP is raised

- There is flushing of the face

- The palms become pale

~~Signs~~

There is retrosternal pain.

Other features are syncope, vomiting, dyspnoea, breathlessness.

Signs - Hypertension, Bradycardia, tachycardia, Anemia, low pulse pressure

On examination - Murmur in precord and myocardial sounds are heard

Diagnosis - History of myocardial infarction heart attack.

There are changes in ECG -  
- ST segment elevation  
- T wave inversion  
Diagnosis → based on C/P

- ECG changes
- 1) ST segment elevation due to presence of leads
- 2) If segment depression. In leads V1, V2 due to "poor" wall MI

Pathological when

- Abnormal rhythm - Bradycardia, Tachycardia
- Arythmia - atrial fibrillation
- Conduction block

ECG changes do bened in contrast leads

- 1) Biochemical markers which mark changes
- 1) CK B
- 2) CK MB
- 3) cTnT
- 4) High sensitive cTn

1) CK-MB :- it peaks in 6-12 hrs  
It returns to normal in 24-36 hrs



### clinical CPE

- chest imaging & cardiac troponin
- renal & electrolyte tests & drugs
- Acute MI diagnosis & myocardial necrosis

### Radiological features

- 1) 2D Echocardiography - there are changes in the heart picture. Depleted changes are seen.
- 2) Chest XRay should be done
- 3) measurement of cardiac MRI

### Treatment of acute ST elevation

- secure the IV line.
- maintain the respiration
- monitor ECG
- attach cardiac monitor

- Pain relief by nitroglycerin sublingual
- O<sub>2</sub> maintain
- Assess the patient
- monitor oximetry
- further treatment

Drugs - Aspirin as an antiplatelet drug

Strepokinase should be given; dilution.

Statins are also mainstay of treatment

surgical ~~int~~ treatment

- 1) Etiology of cirrhosis
- Chronic alcohol consumption
  - Non-alcoholic fatty liver disease
  - Autoimmune hepatitis
  - Primary biliary cirrhosis
  - Chronic viral hepatitis

Clinical features - those due to the pathology causing hepatitis

The cause changes in the structural and functional changes in the liver

- 1) Signs - liver disease
- Jaundice
  - Ascites
  - Spider naevi
  - Palmar erythema
  - Clubbing
  - Enlarged spleen
  - Enlarged liver
  - Enlarged gallbladder
  - Enlarged kidneys
  - Enlarged heart
  - Enlarged lungs
  - Enlarged stomach
  - Enlarged intestines
  - Enlarged bladder
  - Enlarged prostate
  - Enlarged testes
  - Enlarged ovaries
  - Enlarged uterus
  - Enlarged vagina
  - Enlarged cervix
  - Enlarged uterus
  - Enlarged vagina
  - Enlarged cervix

Treatment - Cardinal prevention of alcohol  
if complication

2) Chronic viral hepatitis  
Chronic liver disease is present  
there may be remission  
fever, malaise, myalgia

3) Acute viral hepatitis  
if complication



clouds - glucocorticoids

Acute liver hepatitis - It is caused  
due to immune response to the antigens  
present in the liver  
Symptoms - hepatomegaly

### Portal Hypertension

It is due to the increase in the venous  
drainage of from the liver  
which leads to increase in the portal  
vein pressure.

there are ~~increased~~

Clinical feature - the size of the  
portal vein is increased ~~at~~

the venous drainage capacity is increased.

There is changes of thrombocytin

2



Supervisor's Signature

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TALEGAON DABHADE (PUNE - 410 507)  
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**ANSWER - BOOK**

Roll No. 108 M.B.B.S. III (II) Term \_\_\_\_\_  
 Examination Belim EXAM Subject Medicine - I  
 Paper I Section C Date 26/09/2019

Q. No.	Sub Question										TOTAL MARKS
	1/A	2/B	3/C	4/D	5/E	6/F	7/G	8/H	9/I	10/J	
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Perusal date   /  /   Sign of teacher (Assessor) *Pratik*

Sign of student *[Signature]* Sign of H.O.D. \_\_\_\_\_



## Section 2

Diagnosis of treatment of malarial infection  
related with the use of malaria  
which is the

It is a kind of fever

Diagnosis: The patient has fever  
which is of high grade

- High grade fever with chills and cold
- The blood test can be done to find out Hematocrit, globin or ratio
- The ESR rate is high in the presence of fever or infection
- The Prothrombin time also is increased
- Test such as in ELISA, Immunoglobulin assay can be done for finding cause
- Peripheral blood smear can also be done
- Blood culture to find out exact parasite for the cause of infection

Treatment of choice of Plasmodium falciparum is artemisinin which can be administered three daily

Bumaperone is the choice of drug and most acceptable now. Primaquine can be given daily for 14 days and it has significant effect.

Tric can be treated by antipyretic drug

ART can be also used to treat as it is also helpful in treating the drug resistant malaria.

Radical cure of complicated vivax malaria can be treated by Primaquine which has considerable and significant effect



It is a viral disease which is spread through  
 contact with the infected person.  
 It is a viral disease which is spread through  
 contact with the infected person.  
 It is a viral disease which is spread through  
 contact with the infected person.  
 It is a viral disease which is spread through  
 contact with the infected person.  
 It is a viral disease which is spread through  
 contact with the infected person.

Clinical features

- High grade fever is seen which lasts upto 4 days
- Incubation period is 1-7 days
- There is continuous phase of fever
- These chills happen to be present
- Tremors can be present
- loss of appetite and nausea, giddiness
- weakness in the body
- Decreased Respiratory efforts

caused due to  
in 2009 in  
as influenza  
swine (H1N1) 2009  
rainy & winter  
rough water  
used in number  
in of the

lasts  
ms

the virus which can be used to detect  
the unusual changes  
Respiratory specimens can be collected and sent for investigation  
of influenza should be sent for investigation on  
dry ice

there are ways in which the infection can  
spread 1) Airborne 2) Droplet way  
the case should be taken during the  
period of flu.

isolation

Treatment- Treatment of H1N1 is  
that the patient should be separated  
and isolated and treated.

Intravenous fluid should be properly  
maintained ~~at~~

fever should be treated with paracetamol



Cardiostat should be maintained  
High calcium should be maintained  
Proper oxygenation should be kept  
Arterial and blood pressure should be monitored  
Anesthesia should be maintained  
The use of hyperventilation after  
hospitalization

### of Dengue fever

Less a short duration, pain, fever, etc.

It is less severe, which is a characteristic of Dengue.

There is severe pain, usually type of pain.

The fever is about  $104^{\circ}\text{F}$ .

The fever remains continuous but in some types it gets less for 2-3 days and again starts.

### Clinical features

- High fever which is continuously present.
- Chills and cold in present and there is shivering.
- loss of appetite and weakness.
- back pain of severe grade.
- nausea, and giddiness is present.
- It has low breathing.



Treatment - In first 24 hours are very important

- Maintenance of 27 fluids and airway
- Urine output should be 200-300 ml/day
- Urine should be treated
- The JVP should be maintained by phorololol
- Paper balance should be maintained
- Blood pressure and pulse should be monitored

Investigations -

WBC count should be checked -

Prothrombin time increases

Peripheral blood smear should be done and the infected WBC should be compared with parasite

ESR rate increases -

Platelet count should be monitored  
if the blood infusion is necessary.  
As the fever gradually decreases.

The WBC starts increasing as the  
fever subsides.

Platelet count also about coming to normal.

The High Calorie intake should be maintained.

Proper diet and liquid should be taken.

2/2



1) Investigation - It is a condition of thyroid hormone.

2) The level of  $T_3$  &  $T_4$  increases while  $TSH$  remains same.

3) Swelling on the thyroid gland.

4) Palpitation.

5) Increase in BP & pulse.

6) Loss of appetite.

Investigations:

Diagnosis - The  $T_3$  &  $T_4$  level are increased while  $TSH$  level remains same or decrease.

- Thyroid junction test - can be done.

- Blood test to find out the levels of the  $T_3$   $T_4$   $TSH$ .

- Physical examination in which the doctor checks for swelling on the thyroid gland.

Treatment - There is a series of ways for treatment of hyperthyroidism

1) Anti-thyroid drugs.

a) Radioactive therapy

b) Surgical extraction

The Anti-thyroid drugs are given to maintain the levels of the  $T_3$  &  $T_4$ .  
Propylthiouracil, Carbimazole are the drugs.

there is a temporary solution.  
young pt who are treated who cannot take radioactive therapy

Pregnant women are also treated with this anti-thyroid therapy

c) Radioactive therapy - Contraindicated in pregnancy

$I^{131}$  is given as a treatment which causes depletion of the thyroid gland.

young patients are not treated.



Remove above age 10 years and younger  
Young patients with stability are low  
development of the growth treatment

main di  
- Surgery - The removal of the thyroid gland  
is the ultimate option in the  
patients with high thyroid levels  
Old patients are not preferred.

the main complication is that  
Patient can may land in the hypothyroid  
state

My patient Ravianna, female  
aged 45 years, with a  
case of the OPD on 10/11/2011  
admitted for

CNS: My patient is conscious, cooperative, oriented  
place & person  
Higher function → level of consciousness normal  
Intelligence, speech & language, M. Abstraction  
or hallucination

Cranial nerve examination  
Olfactory - (+)      Oculomotor (+)  
Optic - (+)      Trochlear  
Facial N - (+)      Glossopharyngeal nerve: (+)

Motor examination  
Tone - Resistance to passive movement  
Biceps - Increased RT side  
Triceps - M  
Wrist - M

Nutrition - slight wasting &  
power - Resistance to movement  
Triceps biceps, supination grade 4



12  
 13  
 14  
 15

Grade check  
 upper limb  
 lower limb  
 Hand/wrist - distal below ankle  
 Deep data - Joint position.  
 Joint of arboration.

Reflex	Biceps	Triceps	Ankle	Knee
RT	+ve	+ve	-ve	sluggish
LT	+ve	+ve		sluggish

Classical Reflex absent

Diagnosis - my pt Having a below Knee  
 amputation is Having distal neuropathy.

my patient ...  
old female ...  
a patient ...  
to OPD ...  
since 15 days.

My patient was ...  
ago when she ...  
Breathlessness was ...  
in nature.

Breathless was ...  
like ...  
Combined ...  
and ...  
by ...  
for ...  
Breathless grade

She complained of ...  
for ...  
was ...  
medication. It was ...

fever was associated with ...  
was also complained of ...  
aggravated on ...  
relieved on ...  
which was ...

She is known case of ...  
She has a history of ...  
Every 5-6 months ...  
she again develops ...









Name: Nishita Rajawat Age: 22 years  
Gender: female  
Chief complaints: Anemia, weight loss  
Duration: 10 days

General examination: The patient is well oriented  
and cooperative & well hydrated with pink skin  
& mucosa.

Temperature - Normal pulse 90 bpm, RR 18/min  
BP 120/80 mm Hg, SpO2 98% on room air  
BMR - 22 wt 55 kg, Hb 10 g/dl, Hct 30%,  
Respiratory rate 18, abdominal examination normal

Tongue - present on lower palpebral conjunctiva, tongue  
nails, skin

No cyanosis, No icterus, Clubbing absent

Keratoderma - absent

Angular cheilitis - absent

Oedema - absent

My patient Raunak Nishita, 65 years old male  
resident of market may be suffering from anaemia.

**MIMER Medical College, Talegaon Dabhade**

**Consolidated report on retest exams-Paediatrics**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets.</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	Nil	Nil
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil

  
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**MIMER Medical College, Talegaon (D)**

**Consolidated report on retest exams-Surgery**

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets.</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	Nil	Nil
2017- 2018	Nil	Nil
2016- 2017	Nil	Nil

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## MIMER Medical College, Talegaon (D)

### Consolidated report on retest exams –Obstetrics -Gynaecology

<b>Year</b>	<b>No. of students</b>	<b>Answer sheets.</b>
2020-2021	Nil	Nil
2019-2020	Nil	Nil
2018-2019	1	Yes
2017- 2018	Nil	Nil
2016- 2017	1	Yes



Professor & HOD  
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