To determine the age of a 16 year old girl which of the following is to be radiographed - (PGI88)

a) Wrist .......ans
b) Knee
c) Ankle
d) Elbow

wrist=16,17 ages
shoulder=17,18 ages
iliac creat:: 18,19,20 ages

Hemodyalysis- BLAST

- Barbiturates
- Li
- Alcohols
- Salicylates
- Theophylline

Various acts-
- The Medical Termination of Pregnancy Act 1971 (Amend 1975)
- The Narcotic Drugs & 1985 Psychotropic Substance Act
- Consumer Protection Act 1986
- Mental Health Act 1987
- Organs Transplantation of Human Act 1994
- Prenatal Diagnostic Technique 1994 (Amend in 2000). Punishment to doctor if gender of embryo is revealed-
  - 1st time--> 3 yr+10,000 fine
  - 2nd time--> 5 yr+10,000 fine (ck)
- Tardieu spots- Petechial hemorrhages found in asphyxia. They are seen above the level of obstruction in asphyxia.
- MTP Act --> 1931 (Amended in 1975)
- Consumer protection act --> 1986
- Drugs and cosmetic rules --> 1945

Universal antidote constituents- (Does not contain *potassium permagnate)

- Charcoal
- Magnesium Oxide
- Tannic acid

<table>
<thead>
<tr>
<th>Beverages</th>
<th>Alcohol content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rum</td>
<td>50-60%</td>
</tr>
<tr>
<td>Whisky/Gin/Brandy</td>
<td>40-45%</td>
</tr>
<tr>
<td>Port/Sherry</td>
<td>20.00%</td>
</tr>
<tr>
<td>Wine</td>
<td>10-15%</td>
</tr>
<tr>
<td>Beer</td>
<td>4-8%</td>
</tr>
</tbody>
</table>

Declarations-
1. Declaration of Oslo --> Therapeutic abortion
2. Declaration of Sydney --> Definition of death
3. Declaration of Munich --> Discrimination in medicine
4. Declaration of Helsinki --> Human experimentation and clinical trials*
5. Declaration of Lisbon --> Rights of patients
6. Declaration of Venice --> Terminal illness
7. Declaration of Tokyo --> Torture in medicine*

Treatment plan for mineral acid poisoning-
1. Gastric lavage is contraindicated
2. Alkaline carbonate and bicarbonate are contraindicated. Because it liberates CO$_2$ causing gastric dilatation and sometimes rupture
3. Prednisolone to prevent oesophageal stricture
4. Tracheostomy --> if there is edema of glottis
5. Nil orally
6. Skin burns or eye burns are washed with sodium bicarbonate
7. Antidote --> Calcium or magnesium oxide*

➢ Hydrocution --> Cold water drowning
➢ ALCOHOL-
  - Widmark's formula is for estimation for alcohol concentration (P=484)
  - Legal limit for INDIA- 30 mg%
  - Follows zero order kinetics
➢ Root of calotropis is poisonous to snakes
➢ Madar juice obtained by incising leaves and stalk of the plant is fed for female infanticide
➢ PM-
  - Cranial cavity is opened first
  - First cavity to open in infant- Stomach (To see milk)
➢ Preservatives-
  - Histopath --> 10% formalin is used
  - Viral --> 80% glycerol in buffered saline
  - Viscera not to be preserved in --> formaldehyde. Use --> NaCl saturated, Rectified spirit
  - Preservatives not necessary --> Lung, Bone, Hair, Nails
  - Volatile poisoning: Preserve brain
  - Blood preserved for DNA fingerprinting = EDTA
➢ For karyotyping the cell needs to be arrested in the metaphase for separating the chromosomes. The monocytes do not divide and therefore they can not be used for karyotyping.
➢ Hypothalamus-
  - Anterior- Hot control
  - Posterior- Cod control
➢ Dribbling of saliva is most important external sign of ante-mortem hanging (d/t stimulation of nerve by the rope)
➢ Concussion- Temporary unconsciousness as a result of blunt force impact to the skull
➢ If a person under oath gives false evidence in the court of law --> Imprisonment upto 7 yrs
➢ Hydrostatic test: done for residual air (not for tidal air)
➢ Whiplash injury- C5, C6 injury (d/t hyper-extension) --> P-231
➢ Boxing injury --> Subdural hemorrhages d/t tearing of dural emissary veins, Parkinson's like symptoms
➢ Exhibitionism is the only sexual perversion punishable under law
➢ Sodomy --> Male (Buggery --> With female)
➢ Gang rape >1 person
Manchousen syndrome by proxy- Child brought to hospital with repeated complaints of parents

Custodial rape:
- 376A--> Housewife not yet divorced (though filed) living together
- 376B--> Public servant intercourse by public servant with woman is his custody
- 376C--> Jail/Remand room
- 376D--> Hospital (by staff)

**Hypostasis** colour in poisoning-
- Nitrates/Potassium/Chlorate/Nitrobenzene/Acetanilide/Bromates → Chocolate or copper brown colour
- Opium → Almost black
- Potassium cyanide → Pinkdigi

Carpholuria (ck) → Thread from fingers

DIATOMS- Maximum concentration --> Femur (Sternm is usually used)

Human hair → Cortex is everything (Animal hair → Medulla is everything)

---

**SYNOPSIS**

- **Blast injury**-
  - Primary Blast injury-(P=194)
    - Solid organs are affected less but those having air are damaged more
    - Most common injuries= lung> git> middle ear
    - Underwater of blast= GIT* > lungs (Q-51)
  - Secondary blast injury- Flying objects (Missiles, Shaprels); PEPERING
  - Tertiary blast injury- Thrown-out and strikes wall, trees etc. giving musculoskeletal injury.
  - Miscellaneous blast injury- Toxic inhalation, fire, radiation, collapse of buildings (asphyxia Q-84) etc.

- **Incendiary bombs**-
  - Contain Mg + Phosphorus
  - Causes burn (temp 1000-3000 C)
  - Molotov cocktail- Type of incendiary bomb. 6 Bottle filled with gasoline and then fired and thrown

- **Firearms(P-167)**-
  - Rifled weapons- Pistol/Revolver
  - Smooth barrel weapons (Shotgun)- Single shot/Multishot

  **Calibre in rifled gun.** Bore/Gauge in shot-gun. Chocking → Shotgun not in rifle

  - Primer of rifled gun contains- Lead, Antimony, Copper and barium (P=171)
  - Comment on particle size of shotgun cartridge-
    - FF
    - FFF
    - FFFF (Smallest)

  **Key hole**-
  - Retocet bullet
  - Tumbling bullet
  - Yawning
• Tandem bullet (2 firing). Tandem cartridge or duplex cartridge- 2 bullets present in same cartridge
• Kennedy wound- unable to appreciate entry or outer table
• Contact shot on abdomen---> Oval---> Since all gases accommodate in oval shape

EDH--> Lucid interval--> MMA
SAH--> Vertebrobasilar artery damage

TORTURE-
• Tandem bullet bruises- Linear bruising can be caused due to being struck with a rod like instrument
• Falangana--> Sole is hit--> because bruise dont appear
• Mutilation- Chopping ear, nose, fingers
• Mutilomania--> torture done on animals
• Electrical torture--> not beyond 220 V
• Knee capping--> Bullet above knee or below it to stop running thieves

Embraming(P-139)--- done within 6 hrs
• 40% formaldehyde + 10% methyl alcohol
• Injection methods-
  ○ Hand/Foot pump
  ○ Stirrup pump
  ○ Gravity---> Best

Glycerine is dehydrating--> and will remove all fluid--> not used in embraming

<table>
<thead>
<tr>
<th>Q. Content of typical embalming fluid r all except-</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.phenol</td>
</tr>
<tr>
<td>b.glycerine</td>
</tr>
<tr>
<td>c.formaline</td>
</tr>
<tr>
<td>d.ethanol----------------------------------------ans</td>
</tr>
</tbody>
</table>

Discussion- exactly phenol is major constituent apart frm glycerine......formaline.... methanol too imp constituents....

n ethanol can b used....c word can.....

but goin wth indian journal of fmt ........

ethanol is best answer in this.......

Basilar skull fracture-
• Battle's sign- is ecchymosis of the mastoid process of the temporal bone.
• Raccoon eyes- is periorbital ecchymosis i.e. "black eyes"

Surrogacy-
• Full surrogacy: IVF embryo of couple--> implanted in surrogate mother in **Blastocyst** stage
• Partial surrogacy- Surrogate is Both gestational and biological mother)---> her own egg

Asphyxia-
• 2 kg blocks jugular vein, 4 kg carotid artery, 15 kg blocks trachea
• Tardian spots: Asphyxia--> Vasodilatation--> Leakage

Putrefaction-
• Delayed by-
  ○ Carbolic acid
• Organophosphorus
• Strichnine
• Endrin
• Dhatura
• Arsenic
• Zinc
• Hastened by-
  • Peritonitis
  • Anasarca
  • Asphyxia

MTP- Qualification of a doctor-
• 25 assisted cases of MTP→ 1st trimester MTP only
• 5 cases + assisted 25→ 1st and 2nd trimester MTP

1. Organ MC involved in blast injuries-
   1. Lung--------ans
   2. Liver
   3. Intestines
   4. Brain

51. The most common affected organ or system in blast under water is-
   1. Lungs
   2. Intestines---------ans
   3. Skin
   4. Heart

2. The bore of a weapon indicates-
   1. The range of the weapon
   2. The diameter of the barrel--------ans
   3. Size of the lead shot
   4. Length of the barrel

6. Embalming fluid contains all except-
   1. Glycerine--------ans
   2. Phenol
   3. Formaldehyde
   4. Methanol

8. Small injury causing big size bruise-
   1. Face----------ans
   2. Scalp
   3. Palm
   4. Sole

9. Which of the following is a cause of death in Arm-Lock
   1. Reflex cardiac arrest
   2. Cerebral ischemia during carotid compression
   3. Asphyxia from airway obstruction
   4. All of the above------------------------ans

10. Urine is preserved in all except-
1. HCL
2. Fluoride
3. Phenol--------ans
4. Thymol

12. Regarding lungs all of the following are true except-
   1. Preserved in cases of volatile poison
   2. Preservatives are added------------------------ans
   3. Sealed in nylon bag and sent to cfsl
   4. Preserved in cyanide poisoning

13. Tradieu’s spots are seen in death due to-
   1. Haemorrhage
   2. Vasovagal shock
   3. Brain tumor
   4. Obstruction of respiratory passages--------ans

14. The ossification centre that comes at the age of viability except-
   1. First part of sternum--------ans
   2. Second part of sternum
   3. Third part of sternum
   4. Talus

15. Dentition is delayed in all except-
   1. Hypothyroidism
   2. Rickets
   3. ill nourished condition
   4. congenital syphilis--------ans

17. Molecular death is-
   1. Complete and irreversible cessation of brain, heart and lungs function
   2. Death of individual tissues and cells after somatic death---------------------ans
   3. Vitals functions are at such a low pitch that cannot be detected by routine clinical examination
   4. Total loss of EEG activity but heart is functioning

19. Magistrate inquest is done by all of the following except-
   1. District magistrate
   2. Executive magistrate
   3. Sub-divisional magistrate
   4. Judicial magistrate--------ans

20. Post-mortem caloricity may be seen in all the following causes of death-
   1. Cholera
   2. Burn------------------------ans
   3. Typhoid
   4. Intense Asphyxial condition

22. Sections related to person with HIV infection are-
   1. S.269 I.P.C & 270 I.P.C--------ans(269 for venereal d/e; 270 for HIV)
   2. S.299 I.P.C & 300 I.P.C
   3. S. 497 IPC & 498 IPC
   4. S.375 IPC & 376 IPC

23. For Age of abrasion which of the following is correct-
   1. 12-24 hrs-scab dries & falls off
2. 2-3 days-bright scab
3. 4-5 days-epithelium covers the defect-ans
4. 5-7 days-reddish brown scab

25. All of the following are features of Caffey’s syndrome except-
   1. Therapeutic misadventure
   2. Unforeseeable complication
   3. Error of judgement
   4. Contributory negligence-ans

26. All of the following are features of Caffey’s syndrome except-
   1. ATRINGS OF BREADS appearance
   2. Inconsistent history and physical findings
   3. Multiple bruises of different colors
   4. Multiple fracture of same age-ans

27. Most common site of secondary impact injury is-
   1. Head-ans
   2. Abdomen
   3. Chest
   4. Leg

28. The motor cyclist may drive into the back of a large vehicle eg. truck known as-
   1. Tail gating-ans
   2. Gait railing
   3. Hit back
   4. Deadly injury

29. MTP Rules 2003 lays down the experience and training of the registered medical practitioner required for conduction of M.T.P includes all except-
   1. Any medical practitioner having diploma or degree in obs & gyn
   2. 6 month housemanship in obs & gyn
   3. Any RMP who has assisted 25 cases can perform both first and 2nd trimester operation-ans
   4. Any medical practitioner who has three year experience obs & gyn

30. Dementia pugellistica or Goofy leads to-
   1. Intraparenchymal hg’
   2. Sub arachnoid hg’
   3. Sub dural hg’-ans(seen in boxers)
   4. Epidural hg’

31. Key hole entry wound is seen in all of the following except-
   1. Dum-dum bullet-ans(P-172)
   2. Yawning bullet
   3. Ricochet bullet
   4. Tumbling bullet

32. In firearm injury, entry wound smudging is due to-
   1. Flame
   2. Hot gases
   3. Smoke-ans(singing d/t flame I guess)
   4. Unburned powder

35. All of the following are test for blood grouping except-
   1. Peroxidase enzyme test-ans
2. Mixed agglutination test
3. Absorption inhibition test
4. Absorption elution test

36. Disputed maternity can be solved by using the following tests except-
   1. Blood grouping
   2. HLA typing
   3. Precipitin test- (for differentiating human blood from animals)
   4. DNA finger printing

37. In prenatal diagnostic technique Act 1994, which one of the following is not a ground for carrying out prenatal test-
   1. Pregnant women above 35 years of age
   2. History of two or more spontaneous abortion or fetal loss
   3. When fetal heart rate is 160 per minute at fifth and 120 per minute at the ninth month- ans
   4. History of exposure to potentially teratogenic drugs

38. If any person seeks aid for sex selection for conducting prenatal diagnostic technique on any pregnant women for the first time, he shall be punished with-
   1. 3 years + Fine Rs 50000- ans
   2. 5 years + Fine Rs 100000
   3. 3 years + Fine Rs 10000
   4. 5 years + Fine Rs 10000

40. Which cause of death would cause an elevated level of cyanide-
   1. Cold
   2. Starvation
   3. Thermal burn- ans
   4. Poisoning

42. A person comes with features of MI and blood per rectum, nasal mucosa is perforated, which drug has been abused-
   1. Opium
   2. Cocaine- ans
   3. Heroin
   4. Dhatura

45. Value of all of the following indices of pelvis are more in female except-
   1. Corpobasal index- ans(less)
   2. Sciatic notch index
   3. Ischiopubic index
   4. None

48. Drumstick form of nuclear appendage in neutrophil of females is known as-
   1. Davidson body- ans
   2. Barr body
   3. Golgi body
   4. Basophilic body

53. Parotid swelling occurs in poisoning with-
   1. Iodine- ans
   2. Mercury
   3. Thallium
   4. Barium

56. Extensive abrasions are found on the body of a pedestrian lying by the road side. What is the cause-
   1. Primary impact injury
2. Secondary impact injury
3. Secondary injury-------------------ans
4. Postmortem artifact

57. All are traumatic asphyxia except-
   1. Railway accident
   2. Road traffic accident
   3. Accidental strangulation---------ans
   4. Stampede

59. Magnesium sulphate lavage is done in poisoning with-
   1. Aniline
   2. Copper sulphate
   3. Ethyl alcohol
   4. Phenol--------------------------ans

60. Kennedy phenomenon deals with-
   1. Evaluation of exit and entry wound-----------------ans
   2. Evaluation of burn wounds
   3. Effects of poisoning on stomavh mucosa
   4. Estimation of fetal age

61. The most preferred site for collection of blood in alcohol poisoning-
   1. Femoral vein-----------ans
   2. Radial entry
   3. Subclavian vein
   4. Cardiac

62. Cholera like action is seen in poisoning by-
   1. Ricinus communis---------ans
   2. Calotropis gigantean
   3. Ergot
   4. Abrus precatorius

63. Ewing's postulates deals with the relationship between-
   1. Trauma & tumor----------------ans
   2. Trauma &MI
   3. Trauma & SAH
   4. Trauma & poisoning

64. Putrefaction is fast in all except-
   1. Peritonitis
   2. Septicemia
   3. Anasarca
   4. Zinc chloride poisoning----------------ans

65. The best method of injection in embalming is-
   1. Continuous injection and drainage
   2. Continuous injection with disrupted drainage
   3. Alternate injection and drainage
   4. Discontinuous injection and drainage----------------ans

67. Paltauf's hemorrhage is seen in-
   1. Wet drowning----------------ans
   2. Dry drowning
3. Electrocution
4. Suicide hanging

68. Which of the following poisons has only local action-
   1. Sulphuric acid------------------ans
   2. Carboxylic acid
   3. Oxalic acid
   4. Phosphorus

72. Why not brain, but brain stem death is taken as point of no return-
   1. Medullary neurons are most resistant to anoxia, if they are dead then higher centers are also dead
   2. Brainstem is responsible for vital functions because it is the seat of respiratory and circulatory centers
   3. Brainstem is responsible for proper functioning of cortex as all motor and sensory nerves pass through this gateway
   4. All------------------------ans

73. Fracture of hyoid bone, thyroid cartilage and cricoid cartilage along with extensive bruising of neck muscles suggest a diagnosis of-
   1. Manual strangulation----------ans
   2. Ligature strangulation
   3. Hanging
   4. Choking

74. Age of bruise which of the following is correct-
   1. 3rd day-red
   2. 5th day-green------------------ans
   3. 6th day-yellow
   4. 4th day-blue

Discussion-
5--> Green (5 looks like G)
7--> Yellow (7 looks like Y)

75. Which of the following feature does not differentiate ante mortem bruise from postmortem hypostasis-
   1. Variegated in color------------------ans(See Q-93)
   2. Clearly defined margins
   3. Present anywhere in body
   4. Extravasated blood in surrounding tissues which cannot be easily washed away

77. Sex of the fetus is easily recognised at the end of _________ of intra uterine life-
   1. 1st month
   2. 2nd month
   3. 3rd month
   4. 4th month------------------ans

78. All of the following are features of ligature mark of strangulation except-
   1. Transversely placed
   2. At the level of thyroid cartilage
   3. Complete encircles the neck
   4. On dissection hard, pale & Glistening ligature mark--------ans(P-293)

79. An incised looking lacerated wound will be seen on the following sites except-
   1. Scalp
   2. Lower jaw
   3. Iliac crest
   4. Abdomen------------------ans
80. Not true about consent is-
1. Explaining to the patient the nature of his disease, the proposed treatment or procedure, the alternative procedure, the risks and the benefits involved both the proposed and alternative procedure, the relative chances of success or failure of both procedures
2. In case of emergency consent is not necessary
3. In case of criminal cases, the victim cannot be examined without his/her consent
4. Blanket consent authorizes the attending physician or surgeon to do whatever he thinks best for him under the circumstances

81. With reference to an incised wound all the following are true except-
1. It has clean cut margins
2. Bleeding is generally less than in laceration
3. Tailing is often present
4. Length of injury does not correspond with the length of the blade

82. Numerous small missiles causing bruise, abrasion & laceration is known as-
1. Pepper and salt appearance
2. Pepering
3. Button hole appearance
4. Tertiary blast injury

86. Which of the following is the simplest, safest & lowest of the injection method in embalming-
1. Stirrup pump
2. Bulb syringe
3. Gravity injector
4. Motorized injector

87. Fragmentation of blood column in the retinal vessel known as-
1. KEVORKIAN SIGN
2. Segmentation sign
3. Trucking sign
4. Chicken wire appearance

88. En-masse removal of organs during autopsy is known as-
1. Technique of R. Virchow
2. Technique of C. Rokitansky
3. Technique of A. Gibon
4. Technique of M. Letulle

90. According to juvenile justice act as juvenile is-
1. A girl below 16 years of age
2. A girl or a boy below 16 years of age
3. A girl or a boy below 18 years of age
4. A boy below 16 years of age

92. Professional secrecy is a-
1. Legal responsibility
2. Ethical responsibility
3. Social responsibility
4. Implied term of contract between doctor and patient

94. Which of the following causes fracture of roof of orbit-
1. Injury to forehead
2. Injury to parietal bone
3. Blow to the lower jaw
4. Blow to the occiput---------------ans

95. Extent of injury due to bullet is directly proportional to-
   1. Weight
   2. Shape
   3. Size
   4. Velocity---------ans

97. In judicial hanging fracture of vertebral column is seen between-
   1. C1 and C2
   2. C2 and C3------------ans
   3. C4 and C5
   4. C5 and C6

98. Cafe-coronary refers to-
   1. Myocardial infarction in cafeteria
   2. Myocardial infarction due to intake of large amount of coffee
   3. Choking------------ans
   4. Strangulation

99. 'Intimal tears of carotid' are usually seen in-
   1. Ligature strangulation
   2. Mugging
   3. Judicial hanging
   4. Partial hanging---------ans

100. 220V current causes death usually by-
    1. Respiratory failure
    2. Ventricular fibrillation---------ans
    3. Asphyxia
    4. Concussion