nformation on PGMEE books, visit our website www.jaypeebrothers.com, for detailed information on PGMEE books, visit our website www.jaypeebrothers.com

JAYPEE

4th Edition

Volume 1

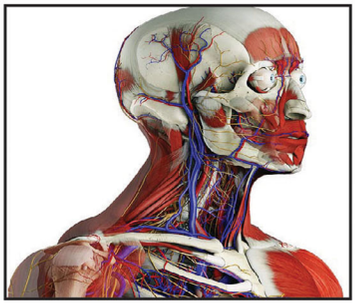
QUICK REVIEW OF PGMEE

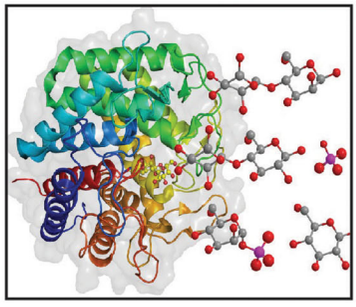
For Various Post Graduate Medical Entrance Examinations

Anatomy, Physiology, Biochemistry, Pathology, Microbiology, Pharmacology, Preventive and Social Medicine, Forensic Medicine

Sharad Chandra

Editor and Compiler
Sangita Chandra



Highlights

- Over 3,000 recently asked original MCQs of preclinical subjects
- All questions are presented with annotated answers, so that the students need not have to 'hunt' for the study material in different textbooks
- Text is lavishly illustrated with line diagrams and photographs
- Explanations are written after consulting latest editions of standard textbooks of respective field
- Easy-to-learn mnemonics, which helps in remembering the mind-boggling facts without taxing the memory, will be proved a gift to the students
- Its concise but comprehensive coverage and unique presentation makes it the 'book of choice' for all PGMEE aspirants

Smiksha Publication

Contents

PART I

Anatomy *1*

PART II

Physiology *81*

PART III

Biochemistry *153*

PART IV

Pathology *193*

PART V

Microbiology *263*

PART VI

Pharmacology *367*

PART VII

Preventive and Social Medicine *451*

PART VIII

Forensic Medicine *541*

PART VIII

Forensic Medicine

Forensic Medicine

1. In suicidal cut throat injuries all of the following may be seen *except:*

A. Hesitation cuts may be seen
B. The wound edges are jagged
C. The injury is usually above the thyroid cartilage
D. The carotid artery is almost always cut *(SGPGI 2003)*

Characteristic features of suicidal cut throat are as under:

- Left side of the neck in a right handed person, rarely both side, commonly above the thyroid cartilage;
- Marked by hesitation cuts either at the beginning, above, or below the main wound;
- Gradual deepening and swallowing with tailing on the right in the right-handed persons;
- Main wound may contain many cuts;
- Sloped down, if at all;
- Often accompanied by wounds across wrists or vital parts elsewhere and healed scars;
- No cuts on hands unless from open razor blades between the fingers;
- As head is thrown back, carotid artery usually escapes injury;
- Weapon is usually present, occasionally firmly grasped by cadaveric spasm; and
- Secluded, quiet place, usually bedroom or locked bathroom, and in front of a mirror, which may show blood splashes

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 4.115 – 4.116*

2. Conduct money is paid to the expert witness along with summon issued from:

A. Criminal courts **B.** Civil court
C. High court **D.** Juvenile court *(AI 1990)*

In **civil cases**, a fee is tendered to cover the expenses to attend the court when the summons is served. This is known as **conduct money**. The party that has called him/her as a witness pays it. If the fee is not tendered, the doctor can ignore the summons. In criminal cases, no such tender is made when the summons is served but a medical witness must always obey the summons otherwise he will be charged with contempt of the court.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 1.10*

3. Leading questions are permitted only in:

A. Examination in chief **B.** Cross-examination
C. Dying declaration **D.** Re-examination *(AI 1995)*

In *cross-examination*, the counsel for the opposite side, i.e. counsel for the accused, seeks to extract from the witness, any facts that may appear to be favorable to his client and which he believes to be within the knowledge of the witness. In this examination leading questions are permissible. *Leading questions* are those questions, which directly or indirectly suggest their desired answers.

Ref: *Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 10*

4. Dying deposition is more important than dying declaration because it is:

A. Made to a magistrate **B.** Oath is taken
C. Made in presence of accused **D.** Cross-examination is permitted *(AIIMS 1997)*

5. Which carries more weight in a court of law:

A. Dying declaration
B. Dying deposition
C. Both carry the same weight
D. Both are not significant *(PGI 1987)*

6. Dying deposition is recorded by:

A. Doctor **B.** Magistrate
C. Police inspector **D.** Any responsible person *(AIIMS 1989)*

Dying deposition is an evidence or dying declaration taken under oath in the presence of accused or his lawyer who is allowed to examine the deponent. This is done before a magistrate. Before the statement is made, the doctor should certify that the victim is compos mentis. *It carries more weight than a dying declaration* in court of law because *a magistrate records it* in presence of the accused and his lawyer who has the opportunity of cross-examining the declarant. Dying deposition retains its full legal value even if the victim survives.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 1.16 – 1.17 & Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 15*

7. Dying declaration can be recorded by:

A. A medical officer **B.** Police officer
C. Magistrate **D.** A lawyer *(AI 1988)*

Dying declaration is a statement, verbal or written, made by a person since deceased narrating the cause of his condition or the circumstances leading to his impending death. If time permits, the attending doctor should arrange for a magistrate to record the dying declaration of a person who is likely to die as a result of criminal violence. If the patient's condition is so grave that death or unconsciousness may supervene before the arrival of a magistrate, the doctor should record the statement himself.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 1.15*

8. Inquiry into the circumstances of death is called:

A. Homicide enquiry report **B.** Inquest report
C. Open verdict **D.** Adjourned verdict *(TN 1991)*

In criminal law the term *inquest* usually refers to *an investigation into the cause of sudden or violent death* of a person, or of the death of a prisoner while in jail.

9. In case of death in lock-up, the inquest is held by:

A. A police officer **B.** A magistrate
C. A panchayat officer **D.** District attorney *(PGI 1986)*

In cases of death in prison, police custody or police firing a *Magistrate's inquest* is held.

Ref: *Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 4*

10. Hematuria may occur in bite of:

A. Krait **B.** Cobra
C. Viper **D.** Sea snake *(UP 2001)*

Symptoms of viperine bite: It produces persistent pain, extensive inflammation with cellulitis, discoloration and incessant oozing of hemolyzed blood from punctured points. Pupils are dilated and insensible to light. There may be multiple hemorrhages, like epistaxis, melena, **hematuria**, hemoptysis, subconjunctival hemorrhage and petechial hemorrhage under the skin.

Ref: *Handbook of forensic medicine & Toxicology by SC Basu; 3rd edition; page 213*

11. Which of the following is a nonpoisonous snake:

A. Viper
B. Krait
C. Sea snake
D. Rat snake *(AIIMS 1987, JIPMER 1992)*

12. Neurotoxic poisonous snake is:
A. Python **B.** Viper
C. Krait **D.** Sea snake *(UP 1995)*

13. Sea snake is:
A. Neurotoxic **B.** Haemotoxic
C. Musculotoxic **D.** All of the above *(AI 1994)*

14. A patient has been allegedly bitten by cobra snake. The venom in such a bite would be:
A. Musculotoxic **B.** Vasculotoxic
C. Cardiotoxic **D.** Neurotoxic *(AI 2003)*

Elapid (**cobra**, king cobra, common **krait**, branded krait, and coral) venom is mainly **neurotoxic**, viper venom mainly vasculotoxic, and venom of sea snake is myotoxic.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 9.44*

15. Ophotoxemia refers to:
A. Scorpion venom poisoning **B.** Snake venom poisoning
C. Heavy metal poisoning **D.** Organophosphorus poisoning *(AIIMS 1994)*

Ophotoxemia means symptoms of poisoning by snake venom because snakes belong to Order Squamata, Sub-order **Ophidia**.

16. Which of the following is *not* a characteristic feature of poisonous snake?
A. Hexagonal plate formed ventromedially
B. 4th labial touches the eye and nasal furrow
C. Belly scales incomplete
D. Fourth infralabial is larger *(AIIMS 1998)*

Differentiating characteristics of poisonous and non-poisonous snakes

	Poisonous snake	Non-poisonous snake
• **Head scales**	Small in vipers, but large in pit vipers, cobra, coral snakes and in kraits.	Large
• **Belly scales**	Large - *cover entire breadth of belly*	Small - do not cover entire breadth of belly
• **Fangs**	Long, hollow or grooved resembling hypodermic needles	Solid and short
• **Tail**	Compressed	Not compressed
• **Bite mark**	Two long fangs with or without teeth marks	Several small teeth bite marks

Ref: *Handbook of forensic medicine & Toxicology by SC Basu; 3rd edition; page 215*
Further reading: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 9.41*

17. Sex is determined by:
A. Urinary cells **B.** Epithelial cells and RBC
C. Dentine **D.** Bone marrow *(AIIMS 1989)*

18. Sex determination is done by:
A. Length of hair
B. Buccal epithelium
C. RBC
D. Moustache hair *(UP 1994)*

***Chromosomal study for determination of sex*:** A scrapping of *buccal mucosa* and a blood film are taken to study the *sex chromatin*. Buccal smear shows a plano-convex mass (Barr body) near nuclear membrane of 20 – 80% cells in female subjects. Blood film shows a drumstick pattern (Davidson body) attached to nuclei of neutrophils (6%) in females.

Ref: *Handbook of forensic medicine & Toxicology by SC Basu; 3rd edition; page 13*

19. Which of the following indicates that the wound in a hospitalized woman typist hit by lathis admitted for 20 days was grievous?
A. She is not able to recognize **B.** Wound does not heal completely
C. Incised wound over scalp **D.** She is not able to do her daily routines *(AIIMS 1985, DELHI 1993)*

20. Grievous injury includes all *except:*
A. Emasculation
B. Permanent privation of hearing
C. Privation of any member joint
D. Disability to follow one's ordinary pursuits for a period of a week
E. Permanent disfiguration of face *(KERALA 2000)*

21. Which of the following includes grievous injury?
A. 10 days stay in hospital **B.** 21 days stay in hospital
C. Temporary disfiguration of face **D.** Temporary privation of sight *(DELHI 1998)*

22. Grievous hurt is punishable under:
A. Section 320 of IPC **B.** Section 354 of IPC
C. Section 321 of IPC **D.** Section 402 of IPC *(ORISSA 2001)*

23. Grievous hurt includes all *except:*
A. Emasculation **B.** Loss of 15 days work
C. Permanent disfigurement **D.** Fracture of bones *(TN 1989)*

24. Privation of any member of joint is a:
A. Serious hurt **B.** Grievous hurt
C. Simple hurt **D.** Dangerous hurt *(AI 1988)*

25. One of the following is an example of a grievous hurt:
A. Scalp laceration **B.** Forearm laceration requiring stitches
C. Fracture of radius **D.** Groin injury with loss of 1 liter of blood *(DELHI 1996)*

Grievous hurt as described in sec.320, I.P.C., refers to the following:
1. Emasculation;
2. Permanent privation of the sight of either eye;
3. Permanent privation of the hearing of either ear;
4. Privation of any member or joint;
5. Destruction or permanent impairing of the powers of any member or joint;
6. Permanent disfiguration of the head or face; and
7. Fracture or dislocation of a bone or tooth

Any hurt which endangers life or which causes the sufferer to be, during the space of **twenty days**, in severe bodily pain, or unable to follow his ordinary pursuits.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 4.59*

26. Acid phosphatase test is done for detection of:
A. Blood stains **B.** Seminal stains
C. Blood grouping **D.** Bone typing *(AI 1991)*

A high concentration of acid phosphatase is found only in the semen of human beings and monkeys. **Acid phosphatase test** is a quantitative test. The amount of acid phosphatase is estimated in a measured specimen. It gives a positive reaction in old stains, in the absence of demonstrable sperms and aspermia.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 7.26*

27. Barberio's test is done to detect:
A. Blood **B.** Urine
C. Saliva **D.** Semen *(PGI 1989)*

28. Which of the following test is used to detect the presence of spermine in semen?
A. Barberio's test **B.** Florence test
C. Phadebas test **D.** Acid phosphate test *(UP 1993)*

Barberio's test depends upon the **presence of spermine in semen**. A few drops of Barberio's reagent (saturated aqueous or alcoholic solution of picric acid) when added to spermatic fluid produce crystals of spermine picrate, which are needle-shaped, rhombic, and of a yellow color. This test is positive even without the presence of spermatozoa.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 7.26*

29. Takayama's reagent is used in:
A. Guiacum test **B.** Castle Mayer test
C. Haemin crystal test **D.** Hemochromogen test *(AI 1991)*

30. In Takayama's test, which of the following is seen under microscope?
A. Yellowish to brownish rhomboid crystals
B. Yellow needle-shaped crystals
C. Pink feathery structure
D. Spherical granules *(AP 1997)*

31. All are the tests for seminal stains *except:*
A. Takayama test
B. Barberio's test
C. Florence test
D. Acid phosphatase test *(AIIMS 1991)*

By microscopic examination of the stain, information can be sought about the presence of **hemoglobin**. Two chemical tests, namely, Takayama's haemochromogen crystal test and Haemin crystal test are employed for this. **Takayama's hemochromogen crystal test** is performed by placing the powdered material scraped from the stain or some of the extracted dried stain on a glass slide. It is then covered by a cover slip. Then 2 – 3 drops of **Takayama's reagent solution** are run in under the cover slip and the slide is examined under microscope after 5 minutes. If blood is present, haemochromogen crystals resembling haemin crystals are seen. These crystals are acicular in shape, **salmon-pink in color** and dispersed in clusters, sheaves and several other forms.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 7.18*

32. Rape is defined as:
A. Intercourse by a man of his wife under the age of 15 years
B. Any women under the age of 16 years
C. With any other woman above the age of 16 years, against her will, without her consent
D. All of the above *(UP 1995, 2000)*

33. A 29-year-old man had sexual intercourse with a 15-year-old female. What is this condition?
A. Rape **B.** Indecent assault
C. Non-cognizable offence **D.** None of the above *(AI 2000)*

34. A 29-year-old man had sexual intercourse with a 14-year-old female, it is a:
A. Divorce **B.** Unnatural sexual offence
C. Rape **D.** Adultery *(UP 1994, AIIMS 1999)*

35. Of the following, which *does not* categorize under rape? Sexual intercourse with:
A. Wife below 15 years **B.** Wife above 20 years
C. Woman below 16 years **D.** Woman above 20 years *(PGI 1993)*

Rape is define, *under section 375* of the amended IPC, as
Unlawful sexual intercourse by a man,
(i) With his own wife under the age of 15 years or
(ii) With any other women under the age of 16 years, with or without her consent or
(iii) With any other woman above the age of 16 years, against her will, without her consent or
(iv) With her consent - when her consent has been obtained by putting her or any person in whom she is interested in fear of death or hurt or
(v) With her consent - when the man knows that he is not her husband and that her consent is given because she believes that he is another man to whom she is or believes herself to be lawfully married or
(vi) With her consent when at the time of giving such consent, by reason of unsoundness of mind or intoxication or the administration of any stupefying or unwholesome substance, she is unable to understand the nature and consequence of that to which she gives consent.
Explanation: Penetration is sufficient to constitute the sexual intercourse necessary to the offence.
Exception: Sexual intercourse by a man with his wife, even against her will, is not rape, if she is above 15 years of age.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 5.29*

36. In India, a boy below……years cannot be charged with rape:
A. 12 **B.** 14
C. 21 **D.** No such limit *(PGI 1990, AIIMS 1991)*

In our country, the **law does not presume any limit of age under with a boy is considered physically incapable of committing the offence of rape.** The court decides the question of the potency of the accused from the evidence of the case and is guided by section 82 & 83 of IPC in awarding punishment. Similarly, there is no upper limit and even old men aged 80 and above are said to have committed rape.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 5.31*

37. Hegar's sign is for the detection of:
A. Dead fetus **B.** Virginity
C. Sterility **D.** Pregnancy *(UP 1992)*

Hegar's sign: At about 6th week of **pregnancy**, the lower uterine segment becomes so soft and compressible that if one hand is placed on the abdomen just above the symphysis pubis and 2 fingers of the other hand are introduced in the posterior fornix, they can be felt touching each other as if there is no uterus in between.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 5.15*

38. Widmark's formula is used for measuring:
A. Blood level of alcohol **B.** Blood level of barbiturates
C. Blood level of benzodiazepines **D.** Blood level of organophosphorus *(AIIMS 2000)*

39. Widmark's formula is used to calculate the quantity of the following in the body after equilibrium between the blood and tissues is reached:
A. Methyl alcohol **B.** Nitrous oxide
C. Ethyl alcohol **D.** Lithium carbonate *(ROHTAK 1986)*

40. Widmark's formula is used for estimation of:
A. Cyanides **B.** Alcohol
C. DDT **D.** Age *(AIIMS 1997)*

Widmark's formula is used for measuring alcohol level in blood. The formula is as under:

A = C x P x R

A = Amount of alcohol in gm,
C = Concentration of alcohol in blood (in grams per kg)
P = Weight of person (in kg)
R = Constant; Value men 0.68 and women 0.50

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 10.29*

41. Chromosomal defect is seen in all *except:*
A. Inter sex **B.** Concealed sex
C. Pseudohermaphroditism **D.** True hermaphrodite *(AI 1997)*

Concealed sex: Criminals sometimes attempt to conceal their sex by a change of dress or other methods to avoid detection. This can be detected by physical examination.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 2.5*

42. Transvestism means:
A. Desire for sex change **B.** Getting pleasure in inflicting pain
C. Wearing clothes of opposite sex **D.** Viewing secretly obscene act *(UP 1996, AI 1996)*

43. Eonism is:
A. Desire to identify with the opposite sex
B. Intercourse with a lower animal
C. Female homosexualism
D. Oral sex *(KERALA 1996)*

Transvestism is a perversion in which the personality is dominated by the desire to be identified with the opposite sex. The fantasy indulged in is clearly 'being a woman' if a male, and 'being a man' if a female. It is also known as **eonism**, after the name of a Frenchman Chevalier d'Enode Beaumont who practiced this perversion. Transvestite men find sexual pleasure in wearing female garments.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 5.55*

44. Sexual perversions include:
A. Exhibitionism **B.** Transvestism
C. Fetichisma **D.** All of the above *(AIIMS 1989)*

Sexual perversions are habitual acts aimed to obtain sexual gratification without sexual intercourse. They include sadism, masochism, fetichism, exhibitionism, transvestism, uranism, voyeurism, frotteurism and urolagnia.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 5.54*

45. Bestiality means:
A. Having intercourse with an animal **B.** Cruelty to animals
C. Used as a cattle poison **D.** Used to induce vomiting in poisoning *(AI 1991)*

46. Bestiality means:
A. Having intercourse with an animal
B. Cruelty to animals
C. Cruelty to fellow human beings
D. Beast like behavior of an insane *(PGI 1992)*

Bestiality: The use of animals for the purpose of sexual enjoyment. Sexual intercourse by a human being with an animal is known as bestiality. Animals used include snakes, poultry, and nonhuman mammals.

Further reading: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 5.53*

47. Spaulding's sign is seen in:
A. Mummification **B.** Maceration
C. Hanging **D.** Drowning *(DELHI 1992)*

48. Spaulding's sign is diagnostic of:
A. Prematurity **B.** Postmaturity
C. Fetal death **D.** Hydrocephalus *(KERALA 1991)*

49. Spalding sign is seen in:
A. Abortion **B.** Stillbirth
C. IUD **D.** Infanticide *(PGI May 2001)*

50. Aseptic autolysis is seen in:
A. Adipocere **B.** Maceration
C. Putrefaction **D.** Mummification *(AIIMS 1998)*

If a fetus dies in-utero and **aseptic autolysis** starts, this process is known as maceration**. Spaulding's sign** (overriding of skull bones in a fetus) is indicative of the death of the fetus and its consequent maceration in-utero.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 2.36*

51. McNaghten's rule is related to:
A. Gunshot injury **B.** Criminal responsibility of insane
C. Drowning **D.** Semen analysis *(UP 1996)*

McNaghten's rule is related to the criminal responsibility of an insane person. It states "nothing is an offence which is done by a person who, at the time of doing it, is, by reason of unsoundness of mind, incapable of knowing the nature of the act, or that he is doing what is either wrong or contrary to law."

52. McNaughten's rule:
A. Section 84 **B.** Section 85
C. Section 86 **D.** Section 87 *(ORRISA 2001)*

The **legal test of insanity** that is accepted in India is embodied in section **84 IPC** which lays down that nothing is an offence which is done by a person who at the time of doing it by reason of unsoundness of mind, incapable of knowing the nature of act, or that he is doing what is either wrong or contrary to law.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 6.30*

53. Perjury is:
A. Willful utterance of falsehood **B.** An act committed within court premises
C. Failure to send summons **D.** Failure to appear as a witness *(TN 1991, MANIPAL 1998)*

54. Perjury means giving willful false evidence by a witness while under oath, the witness is liable to be prosecuted for perjury and the imprisonment may extend to seven years. This falls under which section of IPC?
A. 190 of Indian Penal Code
B. 191 of Indian Penal Code
C. 192 of Indian Penal Code
D. 193 of Indian Penal Code *(AI 2003)*

A witness who after taking oath or making a solemn affirmation willfully makes a statement, which he knows or believes, to be false is guilty of crime of **perjury** under section 193 of IPC.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 1.10*

55. Diatoms are:
A. Algae **B.** Parasites
C. Bacteria **D.** Fungi *(AI 1995)*

56. If diatoms are present in bone marrow of femur, most probable cause of death is:
A. Drowning **B.** Food poisoning
C. Burns **D.** Electrocution *(AI 1991, UP 1996)*

57. The definite postmortem finding of death due to drowning is:
A. Cutis anserina
B. Presence of water in the middle ear
C. Edematous lung
D. Demonstration of diatoms in the organs of the body

Diatoms are a group of unicellular microscopic algae suspended in water. They possess a siliceous cell wall, which resists acid digestion, heat and putrefaction. It is an important test to differentiate whether the victim died of drowning or the dead body was thrown in water after murder. **Only a live body with a circulation can transport diatoms from the lungs to the brain or bone marrow** from where they may be detected microscopically after suitable treatment. There presence is highly suggestive that the victim died due to drowning. Diatom test is valid only if it can be shown that the deceased did not drink this water immediately before submersion; the species recovered from the specimen are all present in the sample from the site of drowning; and various species are present in the same order of dominance for admissible size range in about the same proportion.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 3.69*

58. Goose-skin or cutis anserine is seen in:
A. Hanging **B.** Drowning
C. Poisoning **D.** Shooting *(AIIMS 1986)*

59. Cutis anserina occurs in:
A. Drowning **B.** Infanticide
C. Rape **D.** Throttling *(UP 1996, AI 1993, 1996, 1998)*

The glandular and puckered appearance of the skin known as **cutis anserina or goose-skin** or goose flesh is found on the anterior surface to the body, particularly the limbs especially during winter when the water is cold. It is caused by the contraction of the involuntary muscles (erector pilae) of the skin which elevate the hair follicles and make hair stand erect on the surface of the skin connected with the hair follicles, and is **considered as an important sign showing that drowning has occurred during life**, but it may occur on submersion of the body in cold water immediately after death, while the muscles were still warm and irritable.

Further reading: *Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 214 & Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 3.67 & Handbook of forensic medicine & Toxicology by SC Basu; 3rd edition; page 64*

60. Paltauf's hemorrhage occur in which injury?
A. Strangulation **B.** Hanging
C. Drowning **D.** Burns *(AI 1990)*

61. Paltauf's hemorrhage occurs in:
A. CO poisoning **B.** Drowning
C. Strangulation **D.** Judicial hanging *(AI 1991, AIIMS 1995, UP 2000)*

In case of **death due to drowning**, the lungs are distended, heavy, indented by ribs and pale gray in color. Large patches of hemorrhage are seen in subpleural region, known as **Paltauf's hemorrhage**. The left side of heart is empty and right side is full. Small intestine contains water mixed with mud and sand, if death had occurred due to drowning.

Further reading: *Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 215 & Handbook of forensic medicine & Toxicology by SC Basu; 3rd edition; page 64*

62. Suspended animation is the:
- **A.** Stage from which the patient cannot be resuscitated
- **B.** Stage from which the patient can be resuscitated
- **C.** Life after death
- **D.** Rebirth *(UP 1995, 2000)*

63. Which of the following is true regarding suspended animation?
- **A.** Person can be revived by resuscitation
- **B.** It persist for few seconds to several minutes
- **C.** Common in drowned as well as new born
- **D.** All of the above *(PGI 1997)*

64. Suspended animation is seen in:
- **A.** Burns
- **B.** Electrocution
- **C.** Cyanide poisoning
- **D.** H_2SO_4 poisoning *(AIIMS 1990, AI 1999)*

65. Suspended animation is *not* seen in one of the following conditions:
- **A.** Burns
- **B.** Anesthesia
- **C.** Electrocution
- **D.** Sunstroke *(JHARKHAND 2003)*

Suspended animation is defined as *a condition in which vital functions of body are maintained at such a low level that they cannot be detected by ordinary methods of clinical examination*. **This condition may persist from a few seconds to half an hour or more. Person can be resuscitated** from this condition. It is common with conditions like tantra, yoga, hysteria, hanging, tetanus, etc. [1] Involuntary suspended animation may occur in the apparently drowned; in the newborn; after **anesthesia**; in cerebral concussion; **electrocution**; **heatstroke**; mesmeric trance; in prolonged illness such as typhoid fever; overdose of barbiturates or opiates; and in deep shock. [2]

Ref: *Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 162* [1]
Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 3.6 – 3.7* [2]

66. Hesitant cuts are seen in:
- **A.** Suicide
- **B.** Homicide
- **C.** Accident
- **D.** Infanticide *(AI 1991, 1993, 2002, UP 1993)*

67. Tentative cuts occur in which of the following injury?
- **A.** Accidental
- **B.** Suicidal
- **C.** Fabricated
- **D.** Homicidal *(AI 1990)*

68. Tentative cuts indicate that the mode of injury is:
- **A.** Homicidal
- **B.** Accidental
- **C.** Suicidal
- **D.** Infanticide *(JHARKHAND 2003)*

Hesitation cuts are the initial incisions that are inflicted by a person intending to commit suicide by a cutting instrument. He/she usually makes preliminary cuts before gathering sufficient courage to make a final deeper incision. These preliminary cuts (tentative cuts) are generally small, multiple, superficial, somewhat parallel and are usually skin deep. They are seen near and at the commencement of the incised wound and may merge with the main incision.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 4.14*

69. Pond fracture is commonly seen in:
A. Infants **B.** Adults
C. Alcoholics **D.** Throttling *(AI 2000)*

70. Pond fracture is commonly seen in:
A. Adults **B.** Adolescents
C. Children **D.** Old aged persons *(UP 2000, AI 1998, 1996)*

Pond or indented fractures occur in **children** due to elasticity of their skull bones. The fracture is due to forcible impact against some protruding object. Fissured fractures may be seen round the periphery of the dent.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 4.96*

71. Crocodile skin appearance is seen in:
A. High voltage burns **B.** Electric shock
C. Drowning **D.** Mummification *(KERALA 1996)*

With **very high voltage**, there may be actual arcing of current to an approaching person without actual contact occurring. The victim may be hurled from the vicinity by the force of muscular contraction. All types of burns may occur. Actual charring of tissues with carbonization is common but depending on the degree there may be brownish discoloration of large areas of skin apart from actual burning; arborescent pattern of lightning burns; or crocodile skin effect. The **crocodile skin effect** consists of multiple spark burns over large areas of skin. The temperature generated by an arc current may be about of 4000°C.

Ref: *Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 4.171*

72. Sure sign(s) of death:
A. Cessation of circulation & respiration **B.** No movement of body
C. Brain death **D.** Decomposition of the body *(PGI May 2001)*

Death may be defined as complete and persistent cessation of circulation and respiration. Putrefaction (**decomposition**) begins when rigor mortis virtually ceases and is the most absolute and surest sign of death.

Further reading: *Handbook of forensic medicine & Toxicology by SC Basu; 3rd edition; page 37 - 42*

73. Pugilistic attitude is seen due to:
A. Cadaveric spasm **B.** Coagulation of proteins
C. Rigor mortis **D.** Algor mortis *(CUPGME 2003)*

74. Pugilistic attitude is seen if death occurs as a result of:
A. Cardiac failure **B.** CO poisoning
C. Asphyxia **D.** Burn *(AI 1991, PGI 1999)*

75. Pugilistic attitude is seen in:
A. Burns **B.** Drowning
C. Cardiac failure **D.** Asphyxia *(JIPMER 2002)*

When a body has been exposed to **great heat**, it gets cooked and becomes so rigid with the limbs flexed, arms fixed and fingers hooked like claws that it assumes an attitude of defense, called the **pugilistic or fencing posture**. This attitude is present whether a living or dead body is burnt and has therefore no medicolegal significance. This stiffening is due to the coagulation of its albuminous constituents, more in the flexor muscles than the extensors.

Ref: *Modi's Textbook of Medical Jurisprudence and Toxicology; 21st edition; page 173, 235 &*
Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology; 6th edition; page 4.156

76. In rigor mortis:
A. Muscle stiffens **B.** Muscle shortens
C. Muscle stiffens and shortens **D.** Muscle lengthens *(KERALA 1994)*

r detailed information on PGMEE books, visit our website www.jaypeebrothers.com, for detailed information on PGMEE books, visit our website www.jaypeebro

QUICK REVIEW OF PGMEE

For Various Post Graduate Medical Entrance Examinations

Salient Features

- Over 3,000 original questions of preclinical subjects:
  - Anatomy
  - Physiology
  - Biochemistry
  - Pathology
  - Microbiology
  - Pharmacology
  - Preventive and Social Medicine
  - Forensic Medicine
- All questions with annotated answers accompanied by specific references
- Answers are lavishly illustrated with photographs and explanatory line diagrams
- Useful for All India, various state PGMEEs, AIIMS, SGPGI, PGI Chandigarh, BHU, AMU, etc.

By the same author:
Quick Review of PGMEE, Volume 3 (Clinical Subjects)

Exclusive Distributor in
Samiksha Publication P. Ltd.
Corporate office
New Plaza, Putalisadak, Kathmandu
Ph.No. 00977-1-4440611, 4421410, Sales: 016-9222095
info@samikshapublication.com.np
www.samikshapublication.com.np

Branch/Sales
Adwaitmarga, Bagbazar (Near OLD BUS PARK)
Kathmandu, Nepal, Phone No. 00977-1-4230184, 4244456

Available at all medical bookstores
or buy online at www.jaypeebrothers.com

JAYPEE BROTHERS
Medical Publishers (P) Ltd.
www.jaypeebrothers.com

Join us on facebook.com/JaypeeMedicalPublishers

ISBN 978-93-5250-127-4