

ROUGH WORK

Test Booklet No.

Ph.D. Entrance Examination, July, 2023

Subject : PHYSIOTHERAPY

Name of Candidate Answer Sheet No.

Roll No. of the Candidate Signature of the Candidate:

Date of Examination: Signature of the Invigilator(s)

1.

2.

Time : 2 Hours

[Maximum Marks : 100]

IMPORTANT INSTRUCTIONS

- (i) The question paper is in the form of Test-Booklet containing **100 (Hundred)** questions. Each question carries four answers marked (A), (B), (C) and (D), out of which only one is correct.
- (ii) On receipt of the Test-Booklet (Question Paper), the candidate should immediately check it and ensure that it contains all the pages, i.e., **100** questions (50 in Part-A + 50 in Part-B). Discrepancy, if any, should be reported by the candidate to the invigilator immediately after receiving the Test-Booklet.
- (iii) A separate Answer-Sheet is provided with the Test-Booklet/Question Paper. On this sheet there are **100** rows (50 in Part-A + 50 in Part-B) containing four circles each. One row pertains to one question.
- (iv) The candidate should write his/her roll number at the places provided on the cover page of the Test-Booklet/Question Paper and on the Answer-Sheet and **NOWHERE ELSE**.
- (v) No second Test-Booklet/Question Paper and Answer-Sheet will be given to a candidate. The candidates are advised to be careful in handling it and writing the answer on the Answer-Sheet.
- (vi) For every correct answer of the question **One (1) mark will be awarded**. For every unattempted question, Zero (0) mark shall be awarded. **There is no Negative Marking**.
- (vii) Marking shall be done only on the basis of answers responded on the Answer-Sheet.
- (viii) To mark the answer on the Answer-Sheet, candidate should **darken** the appropriate circle in the row of each question with Blue or Black pen.
- (ix) For each question only **one** circle should be **darkened** as a mark of the answer adopted by the candidate. If more than one circle for the question are found darkened or with one black circle any other circle carries any mark, the question will be treated as cancelled.
- (x) The candidates should not remove any paper from the Test-Booklet/Question Paper. Attempting to remove any paper shall be liable to be punished for use of unfair means.
- (xi) Rough work may be done on the blank space provided in the Test-Booklet/Question Paper only.
- (xii) *Mobile phones (even in Switch-off mode) and such other communication/programmable devices are not allowed inside the examination hall.*
- (xiii) No candidate shall be permitted to leave the examination hall before the expiry of the time.

DO NOT OPEN THIS QUESTION BOOKLET UNTIL ASKED TO DO SO.

Physiotherapy

[P.T.O.]

Physiotherapy

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PART-A
RESEARCH METHODOLOGY

1. Which of the following does not characterise the diagnostic evaluation in teaching system?
 - (A) A type of pre-evaluation in which teacher assesses learner's strengths and weaknesses prior to beginning of teaching process.
 - (B) It is useful in developing curriculum plan based on learner's capabilities.
 - (C) This kind of evaluation is used to estimate and anticipate a pupil's career.
 - (D) It is the process of determining the root cause of a pupil's problem
2. If "X & Y" means X is husband of Y; "X % Y" means X is father of Y; "X @ Y" is mother of Y; then how is A related to M when A % C & F @ L & M?
 - (A) Father-in-law
 - (B) Grand father-in-law
 - (C) Grand father
 - (D) Grand mother-in-law
3. During COVID-19 most classes had moved to online and teachers used interactive slides and presentations to explain concepts. This exemplifies the use of ...
 - (A) Visual aids
 - (B) Audio aids
 - (C) Audio-visual aids
 - (D) All the three

4. Select the number from the given options that can replace the question mark (?) in the following series.
4, 10, 28, ?, 244, 730
 - (A) 82
 - (B) 84
 - (C) 86
 - (D) 80
5. Select the letter from the given options that can replace the question mark (?) in the following series.
I, M, P, T, ?, A
 - (A) Y
 - (B) W
 - (C) V
 - (D) X
6. Which of the following is/are the barrier/s in effective communication?
 1. Unfamiliar accents
 2. Prejudices
 3. Fear or stress
 4. Lack of relevance

Options:

 - (A) 2 and 3
 - (B) 1, 2, and 3
 - (C) 1, 3, and 4
 - (D) 1, 2, 3, and 4

7. research strategy is employed for establishing cause-and-effect relationships that allow generalizations to be extended to similar situations.

- (A) Exploratory
- (B) Explanatory
- (C) Applied
- (D) Descriptive

8. If in a coding system DAYCARE is coded as 54 and JOURNEY is coded as 105, then how will FURTHER be coded in the same coding system?

- (A) 99
- (B) 98
- (C) 96
- (D) 93

9. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one.

- (A) EILP
- (B) LPSW
- (C) ORVY
- (D) CGJN

10. Which of the following statements is true in respect of hypothesis testing?

- 1. Null hypothesis is tested in two-tailed format.
- 2. Alternate hypothesis is tested in two-tailed format.
- 3. Null hypothesis is tested in one-tailed format.
- 4. Alternate hypothesis is tested in one-tailed format.

Options:

- (A) 1 only
- (B) 2 only
- (C) 2 and 3 only
- (D) 1 and 4 only

11. "Discussion" chapter of the thesis deals with

- (A) Connecting the findings back to the research questions, purpose statement, hypotheses, and earlier researches.
- (B) Presenting the collected data in a clear, organized, and factual manner with evidence of hypothesis testing.
- (C) Statistical analysis and organisation of data, drawing inference and interpretation.
- (D) Analyzing the results, checking their significance, and presenting the description with figures.

12. Three statements are given followed by three conclusions numbered I, II, and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements?

Statements:

- 1. All Sparrows are Birds.
- 2. All Birds are Eagles.
- 3. Some Birds are Black.

Conclusions:

- I. Some Black things are Sparrows.
- II. Some Eagles are not Sparrows.
- III. No Black thing is a Sparrow.

Options:

- (A) Only conclusion I follows.
- (B) Only conclusion II follows.
- (C) Only conclusion III follows.
- (D) Either conclusion I or III follows.

13. An agriculture scientist is interested in examining the crop quality of two distinct varieties of wheat seeds (J and K). He decides to sow seed J and K in two plots already prepared and earmarked by each of the fifty-four farmers in a radius of ten kilometers. Irrigation, fertilizer, weeding etc. were almost uniform/controlled across the plots and farms. He is most probably utilizing research.

- (A) Experimental
- (B) Quasi-experimental
- (C) Ex-post facto
- (D) None of these

14. Which of the following sources of data collection usually suffers from a cognitive bias called Halo effect?

- (A) Questionnaire
- (B) Online survey
- (C) Interview
- (D) Laboratory experiment

15. The present examination system

- 1. Does not promote good study habits.
- 2. Promotes rote learning.
- 3. Is not a good test of one's academic attainment.
- 4. Does not encourage students to be regular in the class.

Options:

- (A) 1 and 2 only
- (B) 1, 2, and 4 only
- (C) 2, 3, and 4 only
- (D) 1, 2, 3, and 4

16. Analysis procedure for qualitative data which is largely descriptive and which details the way of life of particular individuals, groups or organizations is called

- (A) Analytic induction
- (B) Life histories
- (C) Ethnographic accounts
- (D) Narrative analysis

17. Which of the learner's characteristics determines how the learner perceives, remembers, thinks, and organizes the information?
- (A) Personal
(B) Cognitive
(C) Academic
(D) All the three
20. Which of the following does not pertain to quantitative data?
- (A) Content analysis
(B) Reliability analysis
(C) Linear model
(D) Data mining
21. The communication becomes circular when:
- (A) the same message moves top to bottom and bottom to top.
(B) each person is both a sender and a receiver.
(C) two different persons receive the same message.
(D) the message is sent again and again

18. Which of the following statements is truthful?

- Any toxic chemicals present in the soil will get absorbed by the plants, these get passed up through the food chain.
- Compared to the other types of pollution, the effects of soil pollution are more obscure, but their implications are well noticeable.

Options:

- (A) Both 1 and 2
(B) None of these
(C) 1 is true, 2 is untrue
(D) 1 is untrue, 2 is true

19. Select the word-pair in which the words are related in the same way as are the words in the following pair.

English : Latin

- (A) Telugu : Malayalam
(B) Gurmukhi : Punjabi
(C) Sanskrit : Devanagari
(D) Urdu : Pashto

22. Observe the statement I and II given below and choose your answer from the given options.
- I. Earthquakes of significant magnitude take place in certain zones of India.
II. The Indian plate thrusts underneath the Eurasian plate at a speed of 5 cm per year, which keeps accumulating in the rocks.

Options:

- (A) Statement I and II are the consequences of some unknown factors.
(B) Statement I and II are unrelated to each other.
(C) Statement II is the consequence and Statement I is its cause.
(D) Statement I is the consequence and Statement II is its cause.

23. The dust and soot released from the industrial chimneys that suspends in the air is a kind of

- (A) Particulate pollutants
(B) Fly ash
(C) Lead & other metals
(D) Gaseous pollutants

24. What was the budget allocation to education for the financial year 2023-24?

- (A) Rs. 1.32 lakh crore
(B) Rs. 1.40 lakh crore
(C) Rs. 1.12 lakh crore
(D) Rs. 1.50 lakh crore

25. When a chosen symbol, word, or gesture conveys multiple meanings, it is characterized as:

- (A) Sender barrier
(B) Personal barrier
(C) Technical barrier
(D) Semantic barrier

26. Asking "Do you understand" on the part of a teacher contributes to classroom communication.

- (A) effectiveness of
(B) confusion in
(C) blurring of real message in
(D) personal bias in

27. Select the characteristics of good teaching amongst the following:

- Can easily impress the students.
- Commitment to encourage independence and motivation.
- Giving fair and objective feedback on students' performance.
- Ability to improvise and adapt to new demands.

Options:

- (A) 2 and 3 only
(B) 1, 3, and 4 only
(C) 2, 3, and 4 only
(D) All the four

28. A researcher has got grouped frequencies across different range of scale values of a variable. Which type of graph can best represent the observed trend of results?

- (A) Scatter plot
(B) Histogram
(C) Pie graph
(D) Line graph

29. A is an organized gathering in which various professionals present and discuss their research work or deliberate on their area of expertise.

- (A) Conference
(B) Seminar
(C) Symposium
(D) Workshop

30. Which among the following are essential defining attributes of ICT?

1. Relevant information may be converted into or delivered through digital forms.
2. Can be deployed for enhancing access to and reach of resources, as well as management of educational system.
3. Includes interactive digital content, internet, and other satellite communication devices.
4. Can be used as a major vehicle for all round socioeconomic development of the country.

Options:

- (A) 2 and 3 only
- (B) 1 and 2 only
- (C) 1, 2, and 3 only
- (D) 1, 2, 3, and 4

31. The Kothari commission report was focused on:

- (A) Earn while learn scheme.
- (B) Diversification of education.
- (C) Education and national development.
- (D) Promotion of basic education rural areas.

32. Which of the following does not characterize communication?

- (A) Message sent is the message received.
- (B) Encompasses sharing and distributive justice.
- (C) Communication maintains and animates life.
- (D) It is a social interaction through messages.

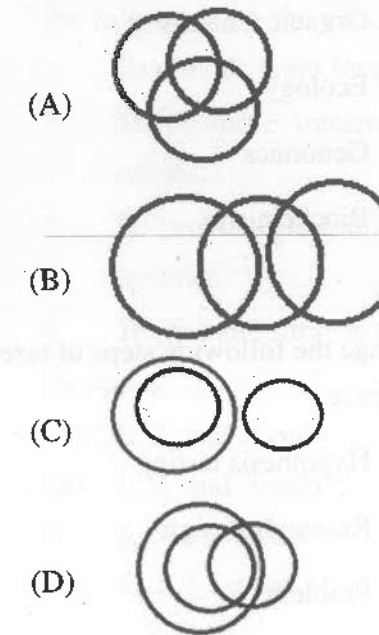
33. The increase in temperature in aquatic system has profound effect on organisms as well as on water quality. Which of the following are its consequences?

1. Bacteria multiply rapidly.
2. Decrease in biological oxygen demand.
3. Reduction in dissolved oxygen.
4. Leads to direct fish mortality.

Options:

- (A) 1 and 3 only
- (B) 3 and 4 only
- (C) 1, 3, and 4 only
- (D) All the four

34. Select the Venn diagram that best illustrates the relationship between the following classes: Men, Boxers, students



35. Which of the following is/are surely the disadvantages of ICT?

1. Potential risk of getting addicted to electronic and social media.
2. Extended use of ICT devices leads to serious health hazards.
3. Periodicals available on internet are very costly propositions.
4. Computer and automated devices are leading cause of unemployment.

Options:

- (A) 2 and 4 only
- (B) 1, 3 and 4 only
- (C) 2, 3, and 4 only
- (D) 1, 2, and 4 only

36. Identify the correct sequence of the following in the communication process.

- (A) Encoding → Message → Receiver → Decoding → Channel
- (B) Message → Encoding → Channel → Receiver → Decoding
- (C) Encoding → Channel → Message → Receiver → Decoding
- (D) Encoding → Channel → Receiver → Message → Decoding

37. The University that telecasts its own interactive educational programs is

- (A) IG National Open University
- (B) Dr. B.R. Ambedkar Open University
- (C) University of Pune
- (D) Annamalai University

38. Should third gender persons be encouraged to get admission in educational institution at par with common people.

Arguments:

- I. Yes, it is their fundamental right, right to equality.
- II. No, it will impair the congenial atmosphere in education institutions.

Options:

- (A) Both the arguments are forceful.
- (B) Either argument I or II is forceful.
- (C) Neither argument I nor II is forceful.
- (D) Only argument I is forceful.

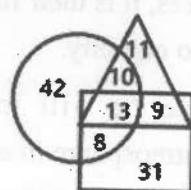
39. What is the full form of computer terminology ADSL?

- (A) Additional data subscription link.
- (B) Asymmetric digital subscriber line.
- (C) Advanced digital system line.
- (D) Access demand subscriber link.

40. Distance education was firstly launched in

- (A) School of Correspondence Courses and Continuing Education, University of Delhi.
- (B) Dr. B.R. Ambedkar Open University.
- (C) Indira Gandhi National Open University.
- (D) Directorate of Distance Education, Annamalai University.

41. If triangle represents motorists, circle represents horse riders, and rectangle represents foot ballers, then what's the number of motorists who are foot ballers but not horse riders.



- (A) 8
- (B) 13
- (C) 9
- (D) 10

42. Three of the following four terms are alike in a certain way and one is different. Pick the number that is different from the rest.

- (A) Organic Chemistry
- (B) Ecology
- (C) Genomics
- (D) Biochemistry

43. Arrange the following steps of research in a sequence:

- 1. Hypothesis testing
- 2. Research design
- 3. Problem
- 4. Data collection

Options:

- (A) 2 → 1 → 3 → 4
- (B) 3 → 2 → 4 → 1
- (C) 3 → 2 → 1 → 4
- (D) 2 → 3 → 1 → 4

44. For most of the parametric statistical analyses the data must qualify

- (A) at least interval level measurement
- (B) at least ordinal level measurement
- (C) at least ratio level measurement
- (D) A or B

45. The Indian Council of Social Science Research is committed to promote research in social science in the country. Which of the following are the areas at its focus?

- 1. To provide grant for research projects.
- 2. To promote international collaborations.
- 3. To provide grant-in-aid for teaching facilities.
- 4. To promote surveys and publications.

Options:

- (A) 1, 2, and 4 only
- (B) 1, 2, and 3 only
- (C) 2, 3, and 4 only
- (D) 1, 2, 3, and 4

Direction (Q. Nos. 46-50) : Read the following passage and answer the question Nos. 46 to 50:

Plenty of vaccines were developed for controlling Coronavirus Disease 2019 (COVID-19) responsible for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic. A study compared the efficacy of these vaccines in preventing symptomatic and severe disease in the adult population and to prevent symptomatic COVID-19 among the elderly. Leading medical databases were searched until August 30, 2021. Only published phase 3 randomized controlled trials (RCTs) evaluated efficacy of the vaccine to prevent symptomatic and severe COVID-19 in adults were included. Two reviewers independently evaluated the literature search results and independently extracted summary data and

the risk of bias was evaluated using the Cochrane RBA Tool. The primary outcomes were the efficacy of the vaccine against symptomatic COVID-19 in adults. A total of 200,000 adult participants from eight phase-3 RCTs were included in NMA, of whom 52% received the intervention (active COVID-19 vaccine). While each of nine vaccines was tested in the unique clinical trial as compared to control, based on indirect comparison, BNT162b2 and mRNA-1273 vaccines were ranked with the highest probability of efficacy against symptomatic COVID-19 (P-scores 0.952 and 0.843, respectively), followed by Gam-COVID-Vac (P-score 0.782), NVX-CoV23730 (P-score 0.700), CoronaVac (P-score 0.570), BN02 (P-score 0.428), WIV04 (P-score 0.327), and Ad26.COV2.S (P-score 0.198). No statistically significant difference was seen in the ability of the vaccines to prevent symptomatic disease in the elderly population. No vaccine was statistically significantly associated with a decreased risk for severe COVID-19 than other vaccines, although mRNA-1273 and Gam-COVID-Vac have the highest P-scores (0.899 and 0.816, respectively), indicating greater protection against severe disease than other vaccines.

46. According to the study fourth most effective vaccine against symptomatic COVID-19 was

- (A) CoronaVac
- (B) mRNA-1273
- (C) NVX-CoV23730
- (D) Gam-COVID-Vac

47. Which of the following statements is surely incorrect?

- (A) In the case of elderly population all the vaccines were almost equally effective in preventing symptomatic disease.
- (B) The study presents evidence that BNT162b2 is the safest vaccine against symptomatic COVID-19.
- (C) Gam-COVID-Vac proved to be second most effective in protection against severe disease.
- (D) Findings of the study may be useful in choosing most effective vaccine for COVID-19.

48. Most probable reason behind independent evaluation of the literature search results by two reviewers is:

- 1. Reducing subjectivity and bias
- 2. Ensuring reliability of findings
- 3. Meeting ethical standard
- 4. Improving validity of findings

Options:

- (A) 1 only
- (B) 1 and 3
- (C) 2 and 4
- (D) 1, 2, and 4

49. The conclusion, "No vaccine was statistically significantly associated with a decreased risk for severe COVID-19 than other vaccines" implies:

- (A) There exists no difference in the efficacy of tried vaccines for severe COVID-19.
- (B) None of the vaccines was found effective in decreasing risk for severe COVID-19.
- (C) Results need to be statistically significant in order to arrive at meaningful inference.
- (D) Some of the vaccines might be statistically associated with a decreased risk for symptomatic COVID-19 than other vaccines.

50. How many of phase-3 adult participants did not receive vaccination dose?

- (A) 104000
- (B) 100400
- (C) 96000
- (D) Can not be ascertained

PART-B PHYSIOTHERAPY

51. Hyperalgesia and allodynia are characteristic features of :

- (A) Thalamic pain syndrome
- (B) Anterior cord syndrome
- (C) Central cord syndrome
- (D) Brown-Sequard syndrome

52. Correction of excessively lordotic posture may help prevent the development of which lumbosacral spine injury?

- (A) spondylitis
- (B) spondylolysis
- (C) Scheuermann's disease
- (D) disc sequestration

53. An athlete presents with pain and paresthesias radiating into the posterior thigh. Which test would be indicated in order to assess for lumbar disc injury?

- (A) Lasègue's test
- (B) Trendelenberg test
- (C) Fabere test
- (D) Hoover test

54. A normal lordotic curve is necessary for shock absorption in the lumbar spine. Tightness in these muscle groups must be addressed in the rehabilitation of an athlete who presents with decreased lumbar lordosis.

- (A) hip flexors
- (B) knee flexors
- (C) trunk extensors
- (D) hip rotators

55. The tapping sign over the transverse carpal ligament tests for _____.

- (A) Artery impingement
- (B) Ganglions
- (C) Tenosynovitis of flexor tendons
- (D) Carpal tunnel syndrome

56. The autonomic nervous system includes any of the following EXCEPT:

- (A) Hypothalamus
- (B) Paravertebral sympathetic trunk
- (C) Vagal nerve
- (D) Cerebral cortex

57. Rash, rubor skin, and itching are examples of:

- (A) systemic adverse drug reaction
- (B) a local adverse drug reaction
- (C) a toxic drug reaction
- (D) an antipruritic reaction

58. Acromegaly is associated with use of:

- (A) Growth hormone
- (B) Clenbuterol
- (C) Chromium
- (D) Creatine phosphate

59. An athlete falls on his/her outstretched arm with the result of pain in the elbow, numbness and tingling down to the ring and little finger. Evaluation would include:
1. Evaluation of the radial nerve along with C 5, C 6 assessment.
 2. Evaluation of the ulnar nerve along with C 8 assessment.
 3. Evaluation of the median nerve along with C 7, C 8 assessment.
 4. Evaluation of the radial nerve along with C 7 assessment.
 5. Evaluation of the median nerve along with T 1 assessment.
- (A) 1, 2
(B) 3, 4
(C) 2, 3, 4, 5
(D) All of the above
60. Rehabilitation activities of a (8 wk) post surgical elbow would include:
1. Increasing strength
 2. Increasing functional activities
 3. Increasing closed kinetic chain activities
 4. Increasing open kinetic chain activities
 5. PNF activities within limits of the injury
- (A) 1, 2, 4
(B) 1, 2, 3, 5
(C) 1, 3, 4
(D) 2, 3, 4
61. The eating disorder bulimia is characterized by each of the following signs except:
- (A) Abuse of laxatives
(B) Increased incidence of caries
(C) Underachieving
(D) Poor body image
62. Inability to perform learned voluntary movement is called as:
- (A) Apraxia
(B) Agnosia
(C) Anasognosia
(D) Somatognosia
63. The liver is located in the _____ quadrant.
- (A) Upper left
(B) Lower left
(C) Upper right
(D) Lower right
64. Painful menstruation is known as:
- (A) Amenorrhea
(B) Dysmenorrhea
(C) Oligomenorrhea
(D) Pelvic inflammatory disease

65. An athlete comes to you complaining of diffuse abdominal pain that is getting increasingly worse. Urination increases his abdominal pain. Your evaluation reveals rebound tenderness and rigidity in the lower right quadrant and a rapid pulse. What pathology do you suspect?
- (A) Kidney infection
(B) Kidney stones
(C) Appendicitis
(D) Spermatic cord torsion
66. Which is not a method to increase flexibility?
- (A) Ballistic stretching
(B) Static stretching
(C) Contract - relax
(D) Goniometric facilitation
67. Relaxation of the antagonistic muscle during contractions is referred to as?
- (A) Autonomic inhibition
(B) Autonomic excitation
(C) Autogenic inhibition
(D) Autogenic excitation
68. If an athlete is able to perform shoulder flexion throughout the complete range of motion in a standing position without any resistance, they would be given a muscle grade of:
- (A) normal
(B) fair
(C) good
(D) poor
69. If an athlete complains of pain in the area of the AC joint, the athletic trainer should perform which of the following tests:
- (A) Apprehension test
(B) Shear test
(C) Yergason test
(D) Traction test
70. Which of the following would not be an appropriate use for electrical stimulating currents
- (A) Tissue temperature increase
(B) Pain modulation
(C) Muscle reeducation
(D) Muscle strengthening
71. Which of the following is not correct concerning the use of infrared modalities (i.e. thermotherapy or cryotherapy)?
- (A) They are used to produce a local and occasionally either a generalized heating or cooling of the superficial tissues.
(B) It is generally accepted that the infrared modalities have a maximum depth of penetration of 1 cm or less.
(C) Only the use of cold can alter metabolic function in a localized area
(D) They are also known to have analgesic effects as a result of stimulation of sensory cutaneous nerve endings.

72. Which of the following adds tension in sciatic nerve mobilization:
- Internal rotation while abduction of hip
 - External rotation while abduction of hip
 - Internal rotation while adduction of hip
 - External rotation while abduction of hip
73. The best determinant of class III ligament instability immediately following an inversion injury to the ankle is:
- laxity greater than the uninvolved ankle with no end point
 - laxity greater than the uninvolved ankle with an end point
 - ability to bear weight and walk with not limp
 - inability to bear weight and walk without a limp
- 1 & 2
 - 1 & 4
 - 2 & 3
 - 2 & 4
74. Symptoms in the fractured leg that would be consistent with a neurovascular compromise are:
- Diminished distal pulse, cooler than other side, increasing numbness, delayed nailbed return.
 - Rapid distal pulse, no temperature difference, no neurologic deficit.
 - Rapid distal pulse, warmer than the other side, radiating nerve pain.
 - Slow distal pulse, cooler than the other side, pins and needles radiating to the hip.
75. Ankle sprains are caused by damage to, hypomobility and/or poor flexibility of the:
- Posterior tibialis
 - Achilles tendon
 - Joint Capsule
 - Plantar fascia
 - Bifurcated ligament
- 1, 2, 4
 - 2, 3, 4
 - 1, 4, 5
 - 2, 3, 5
76. An epidural hematoma usually results from a _____ type injury.
- focal
 - diffused
 - centered
 - low velocity
77. Which of the following finding is not chronic obstructive disease is:
- Central cyanosis with exertion
 - Increased cricosternal distance
 - Barrel chest
 - Intercostals in drawing during inspiration
78. Which would not be a function of using mechanical traction?
- Producing a separation of vertebral bodies
 - Causing a change in proprioceptive discharge of the spinal complex
 - Producing an increase in intravertebral disk pressure
 - Producing a stretch of muscle tissue

79. Flutter is a
- High frequency PEP device
 - Chest compressor
 - Vibrator
 - None of the above
80. Which of the following tests may be used to determine the function of the radial and ulnar arteries supplying the hand?
- Allen's test
 - deQuervain's test
 - Tinel's sign
 - Wrist press
81. Which of the following tests for de Quervain's syndrome?
- Tinel's test
 - Allen's test
 - Phalan's test
 - Finklestein's test
82. Which of the following is the most common cause of wrist sprain?
- Forced hyperflexion
 - Forced torsion
 - Forced hyperextension
 - Force shearing
83. An athlete reports to you with a swollen quadriceps region. Upon examination by you and your team physician, it is determined that the athlete is suffering from an acute thigh contusion. Which would be the most appropriate treatment for this athlete?
- ice for 24 hours, then heat thereafter
 - ice for 48 hours, then heat thereafter
 - heat packs every 2-3 hours
 - ice until the hemorrhaging has stopped
84. The normal QRS time in ECG is:
- Less than 0.05 sec
 - Less than 0.1 sec
 - Less than 0.15 sec
 - More than 0.15 sec
85. During evaluation of a suspected dislocated elbow, the athletic trainer should observe for:
- Supination of the hand
 - The elbow slightly flexed with the forearm appearing shortened
 - Extension with forearm pronated
 - Tenderness medially and posteriorly.
- 1, 2
 - 2, 4
 - 2, 3
 - 2, 3, 4

86. A student athlete with exercise induced asthma asks you to recommend a conditioning workout to supplement his team practices. You should:

- (A) Refuse to make a suggestion
- (B) Suggest extra cross country running
- (C) Suggest swimming
- (D) Discourage cardiovascular workouts

87. A symptom of abdominal injury is:

- (A) Increased thirst
- (B) Increased peristalsis
- (C) Decreased heart rate
- (D) Deep, slow breathing

88. A spontaneous pneumothorax is characterized by:

- (A) Visible trauma at the point of impact
- (B) Rapidly decreasing blood pressure
- (C) A solid sound with percussion to the affected side
- (D) Both (A) & (B)

89. Functional stability is provided by which structures?

- (A) Passive restraints of the muscles
- (B) Joint geometry
- (C) Active restraints of the ligaments
- (D) Joint distraction forces occurring about a joint

90. What does the acronym SAID principle stand for?

- (A) Specific Acquired Intensity Demands
- (B) Sport Adaptations to Imposed Demands
- (C) Specific Adaptation to Imposed Demands
- (D) Specific Adaptation to Increased Demands

91. In order to prevent posterior rotation of the pelvis and the low back pain that rotation may cause, this muscle group must have adequate flexibility.

- (A) hamstrings
- (B) external rotators
- (C) hip flexors
- (D) adductors

92. You have been treating a 17 yr baseball pitcher for low back pain for the past month. The athlete has had some relief with a hamstring stretching program but still complains of pain. He has a noted lordotic posture and states that he has the most pain in the cocking and acceleration phases of pitching. Based on this limited history, what injury are you most suspicious of?

- (A) facet syndrome
- (B) spondylolysis
- (C) disc herniation
- (D) spinal stenosis

93. A wrist fracture resulting from the radius and ulna being forced backward and upward (hyperextension), is called a:

- (A) Bowler's fracture
- (B) Colles' fracture
- (C) De Quervain's fracture
- (D) Smith's fracture

94. The most common mechanism for a hip pointer is:

- (A) a direct hit to the greater trochanter
- (B) a direct hit the iliac crest
- (C) a direct hit to the ASIS
- (D) a direct hit to the AIIS

95. The most effective strengthening exercise for the gluteus maximus muscle is:

- (A) hip flexion
- (B) hip extension with the leg straight
- (C) hip extension with the knee flexed to 90 degrees
- (D) hip adduction

96. The Thomas test assesses tightness of the flexors of the hip. Which of the following are assessed by this test?

- (A) biceps femoris and gracilis
- (B) rectus femoris and vastus lateralis
- (C) iliopsoas and tensor fascia latae
- (D) iliopsoas and rectus femoris

97. What structures are primarily responsible for providing stability to the knee joint?

- (A) Muscles
- (B) Ligaments
- (C) Tendons
- (D) Bones

98. A distance runner presents to the athletic training-room complaining of pain over the lateral aspect of his knee. Upon inspection, you suspect that he may have iliotibial band friction syndrome. What special test would help to confirm your suspicion?

- (A) Noble Test
- (B) Patrick Test
- (C) Ober's Test
- (D) Thomas Test

99. A synovial effusion in the gastrocnemius or semimembranosus bursa caused by lesion in posterior segment of medial meniscus is usually referred to as a?

- (A) Pes Anserine bursitis
- (B) Baker's cyst
- (C) Bucket handle tear
- (D) Fabella syndrome

100. A 40 year old teacher with venous valvular insufficiency is prone to develop

- (A) deep vein thrombosis
- (B) Thromboangitis obliterans
- (C) Raynauds disease
- (D) Stasis ulcers