TECHNICAL PAPER - II

Time Allowed : 2 hours
Full Marks : 150

Attempt all questions.
All questions carry equal marks of 2 each.

1. What is the correct route for blood flow in a human heart:
   (a) Right Atrium - Right Ventricle - Left Ventricle-Left Atrium- Lungs.
   (b) Right Atrium- Right Ventricle- Lungs- Left Atrium- Left Ventricle.
   (c) Left Atrium- Left Ventricle- Lungs - Right Ventricle- Right Atrium.
   (d) Left Atrium- Left Ventricle- Right Atrium- Lungs.

2. Which of the following is not the other name of Athletic Heart Syndrome:
   (a) Athlete’s heart
   (c) Exercised induced cardiomegaly
   (d) Athletic tachycardia
   (b) Athletic bradycardia

3. Heart receives oxygenated blood from:
   (a) Liver
   (c) Lungs
   (b) Kidney
   (d) Left chamber of heart

4. The left side of the heart is responsible for pumping:
   (a) Oxygenated blood to the body
   (c) Deoxygenated blood to the body
   (b) Oxygenated blood to the lungs
   (d) Deoxygenated blood to the lungs

5. The sum of all the stroke volumes ejected from the heart over one minute period is:
   (a) Cardiac output
   (c) End systolic volume
   (b) End diastole volume
   (d) Systolic volume

6. Cardiac pain is an ischaemic pain caused by incomplete abstruction of:
   (a) Aorta
   (c) Coronary artery
   (b) Posterior interventricular artery
   (d) Circumflex branch of left coronary artery

7. In Athletic Heart Syndrome(AHS), the resting heart rate is:
   (a) 100 beats per minute
   (c) Higher than normal
   (b) Lower than normal
   (d) Normal

8. Slow pulse or decrease heart rate is called:
   (a) Palpitation
   (c) Tachycardia
   (b) Arrhythmia
   (d) Bradycardia

9. Irregular pulse or irregular heart rate is called:
   (a) Arrhythmia
   (c) Palpitation
   (b) Bradycardia
   (d) Tachycardia
10. Rapid pulse or increased heart rate is called:
   (a) Bradycardia  (b) Tachycardia
   (c) Arrhythmia    (d) Palpitation

11. How many surfaces are there in human heart:
   (a) 3  (b) 5
   (c) 4  (d) 6

12. How many chambers are there in human heart:
   (a) 1  (b) 2
   (c) 3  (d) 4

13. How many borders are there in human heart:
   (a) 4  (b) 3
   (c) 2  (d) 1

14. Apex of the heart is formed entirely by:
   (a) Left Ventricle  (b) Right Ventricle
   (c) Left Atrium    (d) Right Atrium

15. Chambers of the heart are also known as:
   (a) Atria & cavities (b) Atrias & ventricles
   (c) Ventricles & areas (d) Ventricles & cavities

16. Each muscle fibre is covered with a connective tissue covering called:
   (a) Endomysium  (b) Fasciculus
   (c) Perimysium   (d) Epimysium

17. Skeletal muscles are also known as:
   (a) Striated muscle (b) Smooth muscle
   (c) Cardiac muscle  (d) Soleus muscle

18. The component of muscle cell that distinguishes it from all other cells is:
   (a) Epimysium  (b) Perimysium
   (c) Fasciculus   (d) Myofibril

19. Static muscle contraction is also called the:
   (a) Iso-tonic muscle contraction (b) Iso-metric muscle contraction
   (c) Suxo-tonic muscle contraction (d) Concentric

20. Muscular contraction is of how many types:
   (a) 2  (b) 3
   (c) 4  (d) 5

21. Drugs that can be pushed into the bloodstream by a hypodermic syringe are the following except:
   (a) Heroin  (b) Cocaine
   (c) Anabolic Steroids  (d) Caffeine

22. Stimulants benefit performance by:
   (a) increasing heart and respiratory rates and suppressing the symptoms of fatigue.
   (b) having a painkilling and sedating effect.
   (c) releasing hormones promoting growth, healing and body repair.
   (d) preventing the relax of adrenaline.
23. Narcotic Analgesics benefit performance by
   (a) increasing heart and respiratory rates and suppressing the symptoms of fatigue.
   (b) having a painkilling and sedating effect.
   (c) releasing hormones promoting growth, healing and body repair.
   (d) preventing the relax of adrenaline.

24. Beta blockers benefit performance by:
   (a) increasing heart and respiratory rates and suppressing the symptoms of fatigue.
   (b) having a painkilling and sedating effect.
   (c) releasing hormones promoting growth, healing and body repair.
   (d) preventing the relax of adrenaline.

25. Drugs that are taken with water in the form of drinks:
   (a) Heroin
   (b) Alcohol
   (c) Calmpos
   (d) Depsonil

26. EPD is:
   (a) A hormone and widely used by endurance athletes.
   (b) A steroid and widely used by endurance athletes.
   (c) A hormone and widely used by power athletes.
   (d) A steroid and widely used by power athletes.

27. Amphetamines are an example of:
   (a) Duiretics
   (b) Stimulants
   (c) Steroids
   (d) Betablockers

28. Codeine is an example of:
   (a) Duiretics
   (b) Stimulants
   (c) Narcotic analgesics
   (d) Betablockers

29. Drugs available in the form of tablets:
   (a) Marijuana
   (b) Lysergic acid diethylamide
   (c) Amphetamine
   (d) Cannabis

30. Nandrolone and THG are examples of:
   (a) Hormones
   (b) Diuretics
   (c) Stimulants
   (d) Steroids

31. In knockout system of tournament there are 13 teams, by using power of two(2), how many teams
    are in a bye:
    (a) 2 teams
    (b) 4 teams
    (c) 3 teams
    (d) 5 teams

32. In knockout system there are 13 teams, and how many matches are there?
    (a) 7 matches
    (b) 15 matches
    (c) 13 matches
    (d) 12 matches

33. In a knockout system there are 13 (odd number) teams, 13 teams are divided into 2 halves (i.e.
    upper and lower half) how many teams will be in upper half:
    (a) 4 teams
    (b) 5 teams
    (c) 6 teams
    (d) 7 teams
34. In a knockout system tournament with 13 teams, how many matches will be played for a bye team to reach final:
   (a) 5 matches  
   (b) 4 matches  
   (c) 3 matches  
   (d) 2 matches

35. 20 teams are divided into 4 groups, 5 teams each in a group. 1 team from each group will play semi-finals. How many matches are there in a group matches?
   (a) 5 times  
   (b) 8 times  
   (c) 10 times  
   (d) 6 times

36. In a pool league matches, there are five teams, how many matches a team will play to complete the pool match:
   (a) 7 matches  
   (b) 6 matches  
   (c) 5 matches  
   (d) 4 matches

37. How is the winner from the group league decided?
   (a) By goal difference  
   (b) By points  
   (c) By goal against  
   (d) By head to head

38. In a league cum knockout system, there are 20 teams and teams are divided into 4 group (i.e. A,B,C,D) with 5 teams each. One team will qualify for semi-final, semi-final will be played in knockout system. How many matches a team have to play to reach final:
   (a) 10 matches  
   (b) 8 matches  
   (c) 5 matches  
   (d) 4 matches

39. In a knockout system, there are 16 teams and how many teams will be in a bye?
   (a) 10 teams  
   (b) 3 teams  
   (c) 2 teams  
   (d) None of these

40. When 16 teams are divided into two(2) half, how many teams will be in lower half?
   (a) 7 teams  
   (b) 8 teams  
   (c) 9 teams  
   (d) 5 teams

41. High altitude training at 8000 feet:
   (a) Deteriorates performance  
   (b) Increase muscles strength  
   (c) Enhances performance  
   (d) None of these

42. Adaptation of training load at high altitude is known as:
   (a) Thermoequalation  
   (b) SuperCompensation  
   (c) Acclimatization  
   (d) None of these

43. A climber attempts and assault on a high mountain in the Andes and reaches an altitude of 5000m above sea level. What will happen to his arterial PCO² and PH?
   (a) Both will be lower than normal  
   (b) The PH will rise and PCO² will fall  
   (c) Both will be higher and normal due to the physical exertion.  
   (d) The PH will fall and PCO² will rise.

44. How long does it take to acclimatize to high altitude:
   (a) 5 to 10 days  
   (b) 1 week  
   (c) 2 weeks  
   (d) About 3 to 6 weeks

45. The most severe high altitude stress for human is usually:
   (a) High winds and extreme cold  
   (b) Daily alternating climate extremes  
   (c) Low air pressure  
   (d) High air pressure
46. Common early symptoms of hypoxia at high altitudes include:
   (a) Difficulty with normal level of physical activity
   (b) Fatigue
   (c) Difficulty in thinking clearly
   (d) All of these

47. Which of the following physiological changes are you likely to experience during the first few days at high altitude:
   (a) Decreased pulse rate
   (b) Increased blood pressure
   (c) Increased appetite
   (d) All of these

48. Efficient high altitude acclimatization occurs when:
   (a) The number of red blood cells and capillaries decreases
   (b) Lung expansion capability is reduced
   (c) Both of the above occur
   (d) None of these

49. Which of the following atmospheric changes occur as you climb higher up a tall mountain?
   (a) The air pressure goes down, but the percent of the air that is oxygen remains the same.
   (b) Both the air pressure and the percent of the air that is oxygen go down.
   (c) The air pressure remains the same but the percent of the air that is oxygen goes down.
   (d) All of these

50. While training for long distance, it is better to:
   (a) Train at the ground
   (b) Train at low altitude
   (c) Eat more proteins
   (d) Train at high altitude

51. An injury to a ligament resulting from overstress which causes some degree of damage to the ligament fibres or their attachment is known as:
   (a) Sprain
   (b) Stress
   (c) Dislocation
   (d) Fracture

52. Which of the following is the management of chronic strain:
   (a) Rest
   (b) Compression bandage and ice pack
   (c) Medication
   (d) All of these

53. A damage to some part of the muscle tendon unit and its attachment by overuse is known as:
   (a) Sprain
   (b) Strain
   (c) Dislocation
   (d) Fracture

54. Second degree sprain is:
   (a) Mild
   (b) Moderate
   (c) Severe
   (d) Fatal

55. Total disruption of a joint with no remaining contact between the articular surface:
   (a) Dislocation
   (b) Sublunation
   (c) Haemarthesis
   (d) Fracture

56. An untreated dislocation can cause damage to:
   (a) Ligaments
   (b) Nerves
   (c) Blood vessels
   (d) All of these

57. Fracture of the bone without damage to the surrounding tissue or breaking of the skin is:
   (a) Simple fracture
   (b) Compound fracture
   (c) Avulsion fracture
   (d) Greenstick fracture
58. Complications of bone fractures:
   (a) Blood loss (b) Injuries to organs
   (c) Stunted growth of the bone (d) All of these

59. Which of the following is not the treatment of fracture:
   (a) Splint (b) Plaster cast
   (c) High sodium food (d) Surgically inserted metal rods or plates

60. A bone fracture resulting in an open wound through which bone fragments usually protrude is:
   (a) Simple fracture (b) Compound fracture
   (c) Transverse fracture (d) Oblique fracture

61. According to sports scientist Karvonen Method, normal condition of a player’s heart beat is 40 per
   minutes, how much will be a player’s maximum heart beats per minute during exercise for endurance?
   (a) 120 (b) 136
   (c) 140 (d) 150

62. A player whose heart beat is __________ per minute in a normal condition have good endurance:
   (a) 40-50 beats (b) 52-55 beats
   (c) 56-60 beats (d) 70-80 beats

63. It is desirable that players with remarkable endurance capacity and who are called ‘FIT’ should have
   resting heart rate not more than _________ beats per minute:
   (a) 50 beats (b) 60 beats
   (c) 40 beats (d) 55 beats

64. Beating of pulse is due to:
   (a) Energy (b) Flow of blood
   (c) Flow of water (d) Oxygen

65. Part of hand that should not be used while checking someone else’s pulse is:
   (a) Index finger (b) Middle finger
   (c) Thumb (d) Ring finger

66. If a number is multiplied by three –fourth of itself, then the value thus obtained is 10800. What is that
   number?
   (a) 210 (b) 180
   (c) 120 (d) 160

67. Find the number that does not follow the pattern- 258, 130, 66, 34, 18, 8, 6.
   (a) 130 (b) 66
   (c) 34 (d) 8

68. Which word nearly same in meaning of: Contentment
   (a) Kindness (b) Similarity
   (c) Contrast (d) Satisfaction

69. Choose the appropriate substitute for the bold word in the following sentence without changing its
   meaning.
   The police arrested the thief but his accomplice escaped.
   (a) Friend (b) Partner
   (c) Servant (d) Leader

70. Find out the word which is spelt correctly
    (a) Apparell (b) Apparel
    (c) Aparrel (d) Apparel
71. Which of the shape will come next in the sequence of shapes below?

- (a)
- (b)
- (c)
- (d)

72. Which shape will occupy the “?” position?

- (a)
- (b)
- (c)
- (d)

73. Which figure completes the series?

- (a)
- (b)
- (c)
- (d)
74. Which figure is identical to first?

(a) (b) (c) (d)

75. Samuel’s mother is the only daughter of Esther’s father. How is Esther’s husband related to Samuel?

(a) Father  
(b) Uncle  
(c) Grandfather  
(d) Data inadequate  

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