

MIZORAM PUBLIC SERVICE COMMISSION

TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF COACH GRADE - III UNDER SPORT & YOUTH SERVICES DEPARTMENT, GOVERNMENT OF MIZORAM. APRIL, 2019

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
 - (b) Athletic bradycardia
 - (c) Exercised induced cardiomegaly
 - (d) Athletic tachycardia
3. Heart receives oxygenated blood from:
 - (a) Liver
 - (b) Kidney
 - (c) Lungs
 - (d) Left chamber of heart
4. The left side of the heart is responsible for pumping:
 - (a) Oxygenated blood to the body
 - (b) Oxygenated blood to the lungs
 - (c) Deoxygenated blood to the body
 - (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
 - (b) End diastole volume
 - (c) End systolic volume
 - (d) Systolic volume
6. Cardiac pain is an ischaemic pain caused by incomplete obstruction of:
 - (a) Aorta
 - (b) Posterior interventricular artery
 - (c) Coronary artery
 - (d) Circumflex branch of left coronary artery
7. In Athletic Heart Syndrome(AHS), the resting heart rate is:
 - (a) 100 beats per minute
 - (b) Lower than normal
 - (c) Higher than normal
 - (d) Normal
8. Slow pulse or decrease heart rate is called:
 - (a) Palpitation
 - (b) Arrhythmia
 - (c) Tachycardia
 - (d) Bradycardia
9. Irregular pulse or irregular heart rate is called:
 - (a) Arrhythmia
 - (b) Bradycardia
 - (c) Palpitation
 - (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.

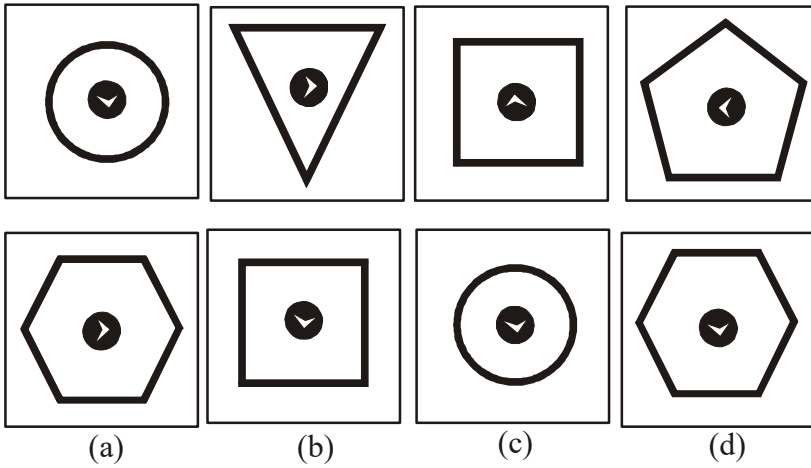
23. Narcotic Analgesis benefit performance by
- (a) increasing heart and respiratory rates and suppressing the symptoms of fatigue.
 - (b) having a painkilling and sedating effect.
 - (c) releasing hormones promoting growth, healing and body repair.
 - (d) preventing the relax of adrenaline.
24. Beta 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) Calmpose
 - (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) Diuretics
 - (b) Stimulants
 - (c) Steroids
 - (d) Betablockers
28. Codeine is an example of:
- (a) Diuretics
 - (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 reached 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 PCO_2 and PH ?
- (a) Both will be lower than normal
(b) The PH will rise and PCO_2 will fall
(c) Both will be higher and normal due to the physical exertion.
(d) The PH will fall and PCO_2 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

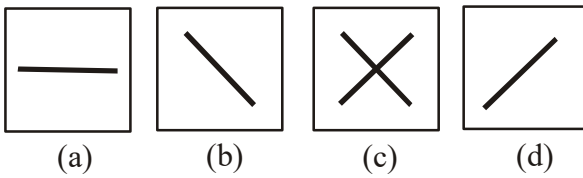
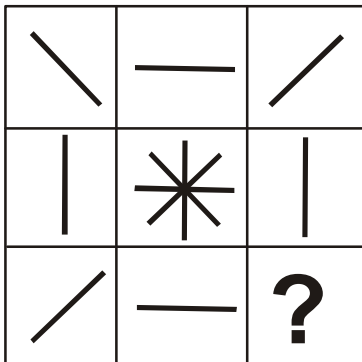
46. Common early symptoms of hypoxia at high altitudes include:
- (a) Difficulty with normal level of physical activity
 - (b) Fatigue
 - (c) Difficulty in thinking clearly
 - (d) All of these
47. Which of the following physiological changes are you likely to experience during the first few days at high 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 over use 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) Subluxation
 - (c) Haemarthrosis
 - (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 protude 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) Apparrel

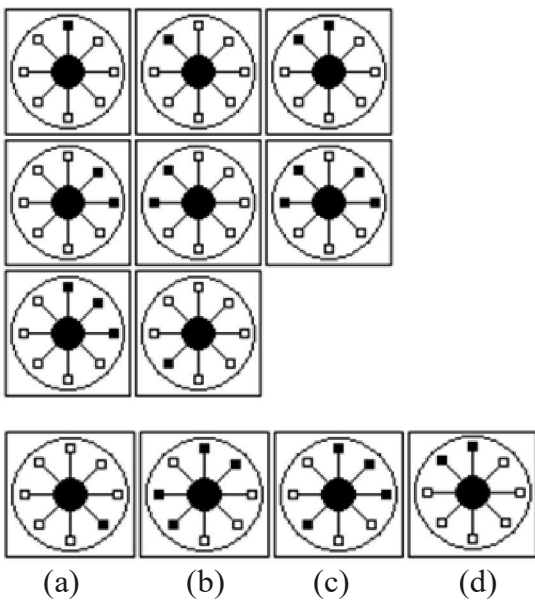
71. Which of the shape will come next in the sequence of shapes below?



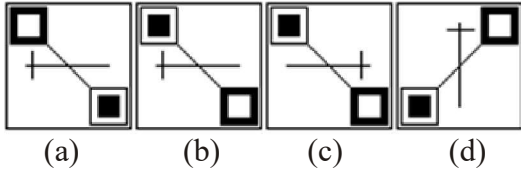
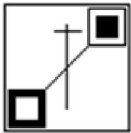
72. Which shape will occupy the “?” position?



73. Which figure completes the series?



74. Which figure is identical to first?



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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