

### Answer Key: Assistant Professor (Physiotherapy)

Q No	Key
1	D
2	A
3	B
4	D
5	D
6	A
7	C
8	A
9	C
10	A
11	B
12	C
13	A
14	B
15	A
16	D
17	B
18	C
19	C
20	C
21	C
22	B
23	C
24	B
25	D

Q No	Key
26	C
27	C
28	B
29	B
30	C
31	C
32	B
33	A
34	B
35	C
36	C
37	A
38	B
39	A
40	C
41	C
42	C
43	C
44	C
45	C
46	C
47	D
48	A
49	C
50	A

Test Booklet

Series

**A**

Test Booklet No.

**Test Booklet for the Post of  
Assistant Professor Physiotherapy**

Name of Applicant ..... Answer Sheet No. ....

Applicant ID/Roll No. : ..... Signature of Applicant : .....

Date of Examination: ..... Signature of the Invigilator(s)

1. ....

Time of Examination : ..... 2. ....

**Duration : 1 Hour]**

**[Maximum Marks : 50**

**IMPORTANT INSTRUCTIONS**

- (i) The question paper is in the form of Test-Booklet containing **50 (Fifty)** questions. All questions are compulsory. Each question carries four answers marked (A), (B), (C) and (D), out of which only one is correct. Choose the correct option or the most appropriate option.
- (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., **50** questions. 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 **50** rows containing four circles each. One row pertains to one question.
- (iv) The candidate should write his/her Application ID/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**. There will be negative marking and 1/4 (0.25) mark will be deducted for every incorrect answer.
- (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 answer will be treated as incorrect.
- (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.

**5 / 1**



1. Which of the following is NOT a common risk factor for developing COPD?  
(A) Smoking (B) Genetic predisposition  
(C) Occupational exposure to pollutants (D) Regular exercise
2. Which of the following spirometric measurements is typically reduced in patients with COPD?  
(A) Forced Expiratory Volume in 1 second (FEV1)  
(B) Forced Vital Capacity (FVC)  
(C) Peak Expiratory Flow Rate (PEFR)  
(D) Total Lung Capacity (TLC)
3. Which of the following medications is commonly used as a bronchodilator in the management of COPD?  
(A) Lisinopril (B) Albuterol  
(C) Furosemide (D) Metoprolol
4. Pulmonary rehabilitation programs for COPD typically include all of the following EXCEPT:  
(A) Exercise training (B) Nutritional counselling  
(C) Smoking cessation counselling (D) Long-term oxygen therapy
5. Which of the following is a primary goal of physiotherapy in the management of COPD?  
(A) Improving maximal oxygen consumption (VO<sub>2</sub>max)  
(B) Decreasing lung compliance  
(C) Increasing airway resistance  
(D) Enhancing pulmonary function and quality of life
6. Which of the following conditions is characterized by an abnormality in chromosome number, such as an extra copy of chromosome 21?  
(A) Down syndrome (B) Cystic fibrosis  
(C) Duchenne muscular dystrophy (D) Hemophilia

7. Which of the following is a common symptom of sickle cell anemia?
- (A) Excessive bleeding (B) Chronic respiratory infections  
(C) Painful episodes called "crises" (D) Muscle weakness and wasting
8. Huntington's disease is an example of a disorder caused by:
- (A) Autosomal dominant inheritance (B) Autosomal recessive inheritance  
(C) X-linked inheritance (D) Mitochondrial inheritance
9. Which of the following is NOT a characteristic feature of Marfan syndrome?
- (A) Tall stature (B) Joint hypermobility  
(C) Webbed fingers (D) Aortic aneurysms
10. Phenylketonuria (PKU) is an example of a disorder caused by:
- (A) Enzyme deficiency (B) Hormonal imbalance  
(C) Chromosomal abnormality (D) Immunodeficiency
11. A patient with a head injury presents with dilated pupils on one side, unconsciousness, and hemiparesis. Which type of head injury is most likely?
- (A) Concussion (B) Epidural hematoma  
(C) Subdural hematoma (D) Skull fracture
12. Which of the following is a common early sign of increased intracranial pressure (ICP) following a head injury?
- (A) Bradycardia (B) Hypotension  
(C) Papilledema (D) Hypothermia
13. What is the most appropriate initial management for a suspected cervical spine injury in a head-injured patient?
- (A) Apply a cervical collar (B) Perform a log roll  
(C) Administer high-flow oxygen (D) Administer intravenous fluids

14. Which of the following imaging modalities is most used to diagnose intracranial haemorrhage following a head injury?
- (A) Magnetic Resonance Imaging (MRI)
  - (B) Computed Tomography (CT) scan
  - (C) X-ray
  - (D) Positron Emission Tomography (PET) scan
15. What is the Glasgow Coma Scale (GCS) score indicating severe head injury?
- (A) 3-8
  - (B) 9-12
  - (C) 13-15
  - (D) 16-20
16. Which of the following is NOT a common cause of coma?
- (A) Traumatic brain injury
  - (B) Drug overdose
  - (C) Hypoglycemia
  - (D) Hypernatremia
17. Sharp pain is elicited beneath the gastrocnemius when the foot is dorsiflexed. This finding is positive for which sign?
- (A) Tinel's sign
  - (B) Allen's test
  - (C) Homen's sign
  - (D) Schober's test
18. A subdural hematoma is characterized by the accumulation of blood:
- (A) Outside the dura mater
  - (B) Within the subarachnoid space
  - (C) Between the arachnoid and pia mater
  - (D) Within the brain parenchyma
19. Which of the following is a common symptom of a subdural hematoma?
- (A) Seizures
  - (B) Hemiparesis
  - (C) Headache
  - (D) Diplopia

20. A closed skull fracture refers to a fracture where:
- (A) The bone is depressed into the brain tissue
  - (B) The bone is exposed to the external environment
  - (C) The integrity of the skin overlying the fracture site is maintained
  - (D) The fracture extends into the cranial vault
21. Which of the following conditions is characterized by the compression of nerve roots at the lumbosacral level, leading to symptoms such as low back pain, sciatica, and bowel/bladder dysfunction?
- (A) Spinal stenosis
  - (B) Cervical spondylosis
  - (C) Cauda equina syndrome
  - (D) Guillain-Barré syndrome
22. Brown-Séquard syndrome typically results from:
- (A) Complete transection of the spinal cord
  - (B) Hemisection of the spinal cord
  - (C) Compression of the cauda equina
  - (D) Ischemic injury to the spinal cord
23. Which cranial nerve is responsible for both sensory and motor functions related to the face, including facial expression, taste sensation, and lacrimation?
- (A) Cranial nerve III (Oculomotor)
  - (B) Cranial nerve V (Trigeminal)
  - (C) Cranial nerve VII (Facial)
  - (D) Cranial nerve IX (Glossopharyngeal)
24. As an ultrasonic beam travels through tissues, the energy contained within it decreases with the distance traversed. This phenomenon is known as :
- (A) Absorption
  - (B) Attenuation
  - (C) Conduction
  - (D) Reflection
25. Carpal tunnel syndrome is caused by compression of the median nerve as it passes through the:
- (A) Cubital tunnel
  - (B) Radial tunnel
  - (C) Guyon's canal
  - (D) Carpal tunnel

26. Which of the following procedures involves the surgical repair or replacement of a damaged or malfunctioning heart valve?
- (A) Coronary artery bypass grafting (CABG)
  - (B) Aortic dissection repair
  - (C) Valve replacement surgery
  - (D) Percutaneous coronary intervention (PCI)
27. Which of the following conditions is commonly treated with a left ventricular assist device (LVAD)?
- (A) Atrial fibrillation
  - (B) Ventricular septal defect
  - (C) Cardiogenic shock
  - (D) Pulmonary embolism
28. During a thoracotomy, which structure is typically accessed for surgical procedures within the chest cavity?
- (A) Heart
  - (B) Lungs
  - (C) Esophagus
  - (D) Liver
29. What is the main objective of lung transplantation surgery?
- (A) To treat congenital heart defects
  - (B) To replace damaged or diseased lungs with healthy donor lungs
  - (C) To repair aortic aneurysms
  - (D) To treat chronic obstructive pulmonary disease (COPD)
30. Which of the following conditions is characterized by the inflammation and narrowing of the airways, leading to symptoms such as wheezing, shortness of breath, and coughing?
- (A) Pulmonary embolism
  - (B) Chronic obstructive pulmonary disease (COPD)
  - (C) Asthma
  - (D) Pneumothorax



31. Pulmonary embolism (PE) is most caused by:
- (A) Bacterial infection in the lungs
  - (B) Accumulation of fluid in the pleural cavity
  - (C) Blood clot traveling from the legs to the lungs
  - (D) Allergic reaction to airborne particles
32. Which of the following cardiac conditions is characterized by an abnormal enlargement of the heart muscle, leading to impaired pumping function and symptoms such as dyspnea and fatigue?
- (A) Aortic dissection
  - (B) Congestive heart failure (CHF)
  - (C) Myocardial infarction (MI)
  - (D) Atrial fibrillation (AFib)
33. A tension pneumothorax is a life-threatening condition characterized by:
- (A) Accumulation of air in the pleural space, causing lung collapse and increased pressure in the chest cavity
  - (B) Accumulation of fluid in the pleural space, causing lung compression and decreased lung volume
  - (C) Inflammation of the pleura, resulting in sharp chest pain exacerbated by breathing or coughing
  - (D) Infection of the lung parenchyma, leading to consolidation and impaired gas exchange
34. Chronic obstructive pulmonary disease (COPD) is often characterized by a combination of which two conditions?
- (A) Asthma and bronchiolitis
  - (B) Emphysema and bronchitis
  - (C) Pneumothorax and atelectasis
  - (D) Pleurisy and pulmonary embolism
35. Which of the following parameters is NOT typically assessed during a cardiopulmonary assessment?
- (A) Blood pressure
  - (B) Respiratory rate
  - (C) Blood glucose level
  - (D) Oxygen saturation

36. Which diagnostic test is commonly used to assess lung function by measuring the maximum amount of air a person can exhale after a deep breath followed by a forced exhalation?
- (A) Electrocardiogram (ECG)
  - (B) Chest X-ray
  - (C) Pulmonary function test (PFT)
  - (D) Arterial blood gas (ABG) analysis
37. Which of the following imaging techniques is often used to visualize the structure and function of the heart, including chambers, valves, and blood flow patterns?
- (A) Ultrasound (echocardiography)
  - (B) Magnetic resonance imaging (MRI)
  - (C) Computed tomography (CT) scan
  - (D) Positron emission tomography (PET) scan
38. Which of the following cardiac stress tests involves the administration of a medication to simulate the effects of exercise on the heart in individuals who are unable to perform physical exercise?
- (A) Treadmill stress test
  - (B) Nuclear stress test
  - (C) Echocardiogram stress test
  - (D) Cardiopulmonary exercise test (CPET)
39. What is the primary purpose of performing an arterial blood gas (ABG) analysis?
- (A) To assess lung function and oxygenation status
  - (B) To evaluate electrolyte balance and acid-base status
  - (C) To diagnose coronary artery disease
  - (D) To measure cardiac output and stroke volume
40. Which of the following is a non-invasive measure of cardiac electrical activity commonly used to diagnose arrhythmias and assess heart rate and rhythm?
- (A) Echocardiogram
  - (B) Cardiac catheterization
  - (C) Electrocardiogram (ECG)
  - (D) Holter monitoring

41. In which diagnostic test is a small tube inserted into a blood vessel in the groin or arm and guided to the heart to visualize the coronary arteries and assess for blockages?
- (A) Pulmonary function test (PFT)
  - (B) Computed tomography (CT) angiography
  - (C) Cardiac catheterization
  - (D) Nuclear stress test
42. Which of the following parameters is typically measured during a cardiopulmonary exercise test (CPET)?
- (A) Blood pressure at rest
  - (B) Forced expiratory volume in 1 second (FEV1)
  - (C) Heart rate response to exercise
  - (D) Arterial blood gas (ABG) levels
43. Which imaging technique involves the injection of a radioactive tracer into the bloodstream to evaluate myocardial perfusion and identify areas of reduced blood flow to the heart muscle?
- (A) Echocardiography
  - (B) Magnetic resonance imaging (MRI)
  - (C) Single-photon emission computed tomography (SPECT)
  - (D) Positron emission tomography (PET)
44. Which of the following pulmonary function tests measures the volume of air forcefully exhaled in one breath after a maximal inhalation and is used to assess airflow limitation?
- (A) Forced vital capacity (FVC)
  - (B) Peak expiratory flow rate (PEFR)
  - (C) Forced expiratory volume in 1 second (FEV1)
  - (D) Total lung capacity (TLC)

45. Which of the following modalities is commonly used in physiotherapy for pain management and inflammation reduction?
- (A) Ultrasound
  - (B) Traction
  - (C) TENS (Transcutaneous Electrical Nerve Stimulation)
  - (D) Ice pack application
46. Which of the following techniques involves the use of manual stretching and mobilization of soft tissues to improve joint range of motion and reduce muscle tightness?
- (A) Ultrasound therapy
  - (B) Therapeutic taping
  - (C) Massage therapy
  - (D) Electrical stimulation
47. According to Newton's first law of motion, an object will remain at rest or in uniform motion in a straight line unless acted upon by:
- (A) Frictional force
  - (B) Gravitational force
  - (C) Resultant force
  - (D) External force
48. Which of the following best describes Newton's second law of motion?
- (A) The acceleration of an object is directly proportional to the net force acting on it and inversely proportional to its mass.
  - (B) For every action, there is an equal and opposite reaction.
  - (C) An object at rest tends to stay at rest, and an object in motion tends to stay in motion unless acted upon by an external force.
  - (D) The force of gravity between two objects is directly proportional to the product of their masses and inversely proportional to the square of the distance between them.
49. Which of the following principles states that the total energy of a closed system remains constant over time, regardless of internal changes?
- (A) Newton's first law of motion
  - (B) Newton's second law of motion
  - (C) Law of conservation of energy
  - (D) Law of universal gravitation
50. Which of the following special tests is commonly used to assess for carpal tunnel syndrome?
- (A) Phalen's test
  - (B) Finkelstein's test
  - (C) Trendelenburg test
  - (D) O'Brien's test

## ROUGH WORK